

Manchester Education Precinct



A Review of the Plan 1974

Manchester Education Precinct: A Review of the Plan, 1974

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Manchester Education Precinct



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Errata List.

Page 4	New Buildings and their Architects		all references to the architects "Cruikshank and Seward" should read "Cruickshank and Seward".
Page 30	Para 3.17	3rd line	"north-west" should read "south-west"
Page 44	Para 4.7	1st line	"and of the Manchester Museum" should be added after "Library"
Page 44	Para 4.13	2nd line	after "Oxford" insert the word "Road"
Page 50	Para 4.58	1st line	after "Technology Senior" insert the word "Union"
Page 56	Para 5.24	1st line	between the words "growth to" and "6000 part-time students" insert "6000 full-time students and"

Appendices

Figure A1 to A13	"50m" scale marking should read "0"
Figure A9	tone indicating residential use should appear additionally over the following buildings: University - Moberly Tower of the Refectory Building. UMIST - Chandos Hall and adjacent block. Polytechnic - residential block on the west side of the Art and design Extension. Table F1 "By 1984 Polytechnic" reduce number of academic staff from "1000" to "800" with consequential reduction in total and sub-totals.

Manchester Education Precinct

A Review of the Plan 1974



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Commissioned jointly by:

The Corporation of Manchester.
The University of Manchester.
The University of Manchester
Institute of Science & Technology.
The United Manchester Hospitals.

Planning Consultants:

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Professor A. L. Armitage, Vice-Chancellor of the University of Manchester (from October 1970)
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	Mr. G. Lee-Wood, BSc, CEng., MICE.	) Department
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	Mr. G. Watson, MCIT	)
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	Mr. G.J. Mingard, BSc, ARICS	— U.M.I.S.T.
	Mr. A.B. Ogden, JP., AMCT	— Manchester Polytechnic
	Mr. G.H. Heaton, FHA	— United Manchester Hospitals
	Mr. J.E. Ellis, BA (Admin)	— Manchester Education Department
	Mr. P.A. Collins,	) Manchester &
	Mr. D.I. Ross,	) Salford Police
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	Mr. J. Snow, BA (Arch) RIBA	) Planning
	Mr. W.T. Ward, MA, B.Arch	) Consultants

Landscape

The Donaldson/Edwards Partnership have been associated with the Planning Consultants on all landscape matters.

Mr. A.J.F. Donaldson, DA, DipLA, AILA	) Donaldson/Edwards
Mr. R.I.S. Edwards, DipLA, AILA	) Partnership

New Buildings and their Architects

Buildings which have been completed within the Precinct since 1967 or are now in course of design or construction are listed below, together with the names of the architects:

University

Joint Matriculation Board Extension	— The Playne Vallance Partnership
Church and Chaplaincy	)
General Purpose Teaching	)
Arts Extension Building	)
Business School	) Cruikshank & Seward
Economics and Social Science Extension (Dover Street)	)
Computer Building	)
Southern Area Development	) Building Design Partnership
Manchester Museum Extension	)
Precinct Centre	— Hugh Wilson & Lewis Womersley
Mathematics	)
Library Extension	) Scherrer & Hicks
Physics (Schuster Building)	)
Medical School (Stopford)	) Harry S. Fairhurst & Son
Students Union Extension	— W.S. Hattrell & Partners
Architecture & Town Planning	— Hanson Kantorowich and Partners

U.M.I.S.T.

Barnes Wallis/Wright Robinson	)
Mathematics & Social Sciences/	) Cruikshank & Seward
Electrical Engineering (Ferranti)	)
Grosvenor Place Residences	)
Booth Street Residences	)
Chemistry	)
Estates & Engineering Services	)
Chemical Engineering Extension	)
Mechanical Engineering (George Begg Building)	) Harry S. Fairhurst & Son
Civil Engineering (Pariser Building)	)
Mathematics and Library	)
Multi-Storey Car Park	)
Central Boiler House	) Hugh Wilson & Lewis Womersley
Staff House Extension	— Thomas Worthington & Sons

U.M.I.S.T./University

Metallurgy	— Cruikshank & Seward
------------	-----------------------

U.M.I.S.T./University/City/Hospitals

Sports Centre	— Hugh Wilson & Lewis Womersley
---------------	---------------------------------

Polytechnic Buildings

John Dalton Extension	)
Loxford Tower (Residences)	) City Architect
General Development around Grosvenor Square	) Richard Sheppard, Robson and Partners (Architects & Planning Consultants)

Adult Education Building

— City Architect

Royal Northern College of Music

— Bickerdike, Allen, Rich & Partners

Hospital Developments

— Fry, Drew, Knight & Creamer (Architects & Planning Consultants)

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Introduction

- 1.1. Our Final Report to the Precinct Joint Committee was published in 1967. In addition to postulating an ultimate plan and total population for the Precinct when it becomes fully developed, estimated then as occurring about 1984, an interim stage of development at October 1972 was also presented. It is particularly appropriate, therefore, that the Joint Committee should have asked for a reappraisal, or up-dating, of the Plan about that time. There is an obvious need for periodic reviews of such a large and complex developing project which is inevitably affected by changing Government policies, the economic climate, and changing social attitudes. In this Review of the Plan we still put forward an ultimate development, but recognise that it is not possible to predict a date by which it will be accomplished; and we present a detailed interim plan which indicates the stage of development likely to be reached by 1978.
- 1.2. From the experience gained in implementing the Plan during the six years following publication of the Final Report three issues of fundamental importance should be recorded:— firstly, the main principles of the Plan have stood the test of time in terms of physical development; secondly, the impetus of development has been maintained in a remarkable manner, despite recurrent national financial crises and severe cost controls; and thirdly, the system of planning briefs has worked well as a means of ensuring that the numerous architects engaged on individual buildings designed them within the total physical framework of the Plan.
- 1.3. There have, nevertheless, been some significant changes since 1967, the following being the most important:—
 - (a) The designation of the Polytechnic in 1970 which incorporates some of the buildings previously described as the City Colleges.
 - (b) The formation of S.E.L.N.E.C. PTE, which has taken over responsibility for public transport from Manchester Corporation Transport Department. *
 - (c) The indefinite postponement of the proposed Airport—City Centre rapid transit line which was to run through the Precinct.
 - (d) The proposed construction of the Piccadilly—Victoria underground railway centre links scheme as an integral part of the regional rail system.
 - (e) An increased social emphasis on the need to improve public transport, accompanied by a growing desire to improve the environment even at the expense of curtailing the use of the private car and restricting car parking.
 - (f) The delay in the up-grading of the main highways until after 1984 — Upper Brook Street and Cambridge Street/Lloyd Street — and the continued doubt about the status of the proposed cross-Precinct route on the line of Grafton Street.
- 1.4. It is considered that the planning policy for car parking recommended in the Final Report and being implemented by the University and U.M.I.S.T., with the approval of the City, is working successfully. It has undoubtedly been right to site the major car parks alongside the peripheral roads, with direct access from them. By so doing the Precinct has been protected from unnecessary cross-movement of cars; drivers have got in and out of car parks speedily; the landscaped treatment of surface car parks has hidden cars from view at ground level; and this siting gives maximum flexibility in regard to the timing of conversion to multi-storey car parking with minimum disturbance to occupants of the academic, residential and communal buildings if and when such conversion takes place.
- 1.5. U.M.I.S.T. has completed one multi-storey car park housing some 850 cars on a financially acceptable basis, thus freeing ground space for building and recreational purposes. The principle of charging for using the car parks has been accepted and implemented by the University and U.M.I.S.T. and a Working Party of all the constituent bodies in the Precinct has been established to co-ordinate policies.
- 1.6. This satisfactory state of affairs has made it possible to carry out a reappraisal of the whole question of the level and form of ultimate car parking provision and of public transport without the fear of having to depart from the basic planning principles of the Final Report.
- 1.7. Because of the major influence on the Precinct Plan of public transport, private travel, car parking and the development of the highway network it was decided in August 1972 to set up a Transportation Working Party to co-ordinate the consideration of these issues. The Working Party comprised, in addition to the Technical Officers of the four Institutions, the City Engineer, City Planning Officer, Manchester & Salford Police, S.E.L.N.E.C. PTE and ourselves. Chapter 2 of this Report is based on the results of the work of the Transportation Working Party.
- 1.8. As a result of the extent of building development accomplished since the 1967 Report was prepared it has become possible and desirable to consider in much greater detail the landscaping of the open spaces

* Since 1st. April 1974 this organisation became Greater Manchester Passenger Transport Executive.

which are of such fundamental importance to the whole environment of the Precinct. Following our report on Landscape Policy issued in July 1973 work has proceeded in collaboration with the Donaldson Edwards Partnership, Landscape Architects, on the preparation of Landscape Structure Plans which form a part of this Review and are described in Chapter 3.

- 1.9. Concurrently with and subsequent to the preparation of the Final Report of 1967 we have carried out a number of other studies and it is appropriate to record here the more important ones which have been issued either for general publication or to the parties involved in developing the Precinct.
- (a) Summary of the Final Report, 1967.
 - (b) Report on Shopping Requirements, September 1965.
 - (c) Implementation Report No.1: Sports Facilities, October 1966.
 - (d) Implementation Report No.2: Materials and Landscaping, October 1966.
 - (e) Implementation Report No.3: Sign-posting, April 1968.
 - (f) Report on the proposed closure of Burlington Street, February 1973.
 - (g) Landscape Policy: July 1973.
- 1.10. A project of particular interest which is being sponsored jointly by all the constituent parties involved in the planning of the Precinct is the Sports Centre, on which a series of studies has been prepared following a report of a Working Party to the Education Precinct Joint Planning Committee in October 1966. These studies have dealt with the type and scale of the various activities which are deemed to be most suited for the purpose; the disposition of accommodation in a manner which would facilitate construction being carried out in stages; estimates of capital and running costs; and arrangements for sharing in the use of the building by the Educational Institutions, Hospitals and the public and the sharing of capital and running costs. The current position is that full sketch designs for the building are being prepared together with estimates of cost. A general description of the Sports Centre is given in Chapter 4.
- 1.11. As the preparation of this Review has coincided with the reorganisation of local government, we take this opportunity of expressing our gratitude to three Chief Officers who have been deeply involved in the M.E.P. project and who have now moved on to the Greater Manchester County — the Town Clerk, Sir George Ogden; the City Planning Officer, Mr. John Millar; and the City Engineer, Mr. John Hayes. The warm and enthusiastic co-operation of these Officers and their respective staffs has materially helped to make our task as co-ordinating planners both stimulating and rewarding.



2 Transportation



Summary

In mid-1972, during the period of preliminary consideration of the Review, it became clear that some of the major road developments which were recommended in the 1967 Report were unlikely to come to fruition by the anticipated dates and that this could have far reaching effects on the development and capacity of the site. Additionally, it was necessary to carry out a reappraisal of travel to the Precinct and to reach firm conclusions on car parking requirements and the control of on-street parking. It was considered therefore that a detailed study of the current situation should be undertaken by those responsible for these various issues in order that alternative solutions could be offered. The Transportation Working Party was therefore set up with this objective in view and Mr. John Hayes, the City Engineer, who had chaired the Technical Control Team which carried out the S.E.L.N.E.C. Transportation Study on the Broad Transportation Plan, acted as Chairman. The Working Party met monthly from August 1972 to October 1973.

This chapter describes the work of the Transportation Working Party; it compares the 1970s and long term predictions of the 1967 Final Report in terms of travel, traffic and highway systems with the 1972 travel and traffic surveys and the outlook pertaining at mid-1973. It sets out the short term and long term objectives of the S.E.L.N.E.C. PTE in respect of improved public transport services. It describes the effect on car parking capacity of the gradual elimination of on-street parking and it postulates a maximum number of possible car parking spaces in the Precinct based on the current state of the highway network and the probability that it will not be significantly improved in the foreseeable future.

The main inferences to be drawn from the surveys and studies are that the highway network in its current state can serve a total of 5,421 Precinct car spaces in the designated car parks established in the 1967 Report. This number includes 840 spaces in the multi-storey car park at U.M.I.S.T. and 1,500 spaces in two further multi-storey car parks which could be built in the University north-west and south-west areas, adjacent to Cambridge Street/Lloyd Street. If no multi-storey car parks beyond the existing U.M.I.S.T. car parks are built, the total car spaces that can be provided in the designated car parks is 4,526.

The S.E.L.N.E.C. PTE state that even if car parking provision is limited to the lower figure of 4,526 spaces in the ultimate development, compared with the figure of 10,000 spaces suggested in the 1967 Report, public transport would have no difficulty in providing the necessary services to and from the Precinct. However, it is suggested that whether or not the services would prove sufficiently attractive in both the short and long term depends to a considerable extent on the scale of capital investment which central and local government is prepared to devote to public transport.

The decision as to whether and when to build the two multi-storey car parks therefore remains for the Institutions – primarily the University – to decide in the light of economic circumstances. However, it is recommended that before embarking on such a policy the Institutions should consider taking the following steps:—

- (i) Explore methods of restricting parking to those spaces at maximum ground level development (4,526 spaces) by such means as allocating them to users with the greatest need.*
- (ii) Raise charges to the same level as those obtaining in Manchester city car parks to enable a more realistic travel choice to be made between private and public transport and thereby increase the incentive to use the latter.*

Illustrations of the road networks and bus routes are shown in Appendix A, Figures A4, A5, A6 and A7.

The Highway Network

The 1967 Report Proposals.

- 2.1. The 1967 Report proposed a three stage development of the highway network: (a) short term; (b) during the 1970s; and (c) long term. The 1970s and long term predictions are given below for comparison with actual achievements by mid-1973 and the future outlook at this date:—

During the 1970s

- (i) Two-way traffic on Upper Brook Street should be extended to Charles Street by making Pritchard Street a one-way north-bound link and the Sackville Street connection to Mancunian Way should be severed.*
- (ii) Two cross-Precinct routes should be established on the lines of Booth Street and Grafton Street.*
- (iii) There should be an improved connection of Cambridge Street to Whitworth Street.*
- (iv) Cambridge Street/Lloyd Street should be realigned.*
- (v) The extension of Princess Parkway should be linked with Mancunian Way.*

- (vi) Cambridge Street/Lloyd Street should be improved to four lanes.
- (vii) Burlington Street, Brunswick Street, Grosvenor Street and Cavendish Street should be closed to reduce extraneous east/west through traffic.

Long Term

The 1970s proposals would establish the basic pattern of vehicular movement in the area. Further development of the highway network, particularly in respect of intersection and junction design, would be necessary if parking policies allowed parking of cars in progressively increasing numbers up to the ultimate figure of 10,000. In addition to Mancunian Way, the city highway proposals include another major east-west route across the Precinct known as the Inner Ring Road which would be constructed on the line of Grafton Street. In the 1967 Report the validity of the line chosen for this highway was questioned and a line further south on Moss Lane East was suggested as being more suitable and avoiding the physical division of the Precinct. Furthermore the need for the existence of this highway was challenged.

Position as at mid-1973

- (i) At the time of the 1967 Report Mancunian Way was completed and traffic flows started at the rate of 26,000 vehicles per day increasing to a present day figure of 49,000. In the previous year (1966) a five-lane tidal flow system was introduced to Upper Brook Street thus increasing its capacity. Before the introduction the peak flow was 1,200 vehicles per hour which compares with over 2,500 at the present time. Pritchard Street is now connected to the Cloak Street roundabout forming a two-way route to Charles Street allowing traffic to enter the City via Oxford Road or Sackville Street without needing to use the Mancunian Way link through U.M.I.S.T. This link will not be closed until Upper Brook Street/Princess Street becomes two-way to the north of Mancunian Way. Morning peak hour commuter traffic now appears to use the Pritchard Street route, turning left into Charles Street and then right at the traffic signals onto Oxford Road thus avoiding the 'buses-only' lanes. There is, however, equally heavy use of Sackville Street, Mancunian Way and Grosvenor Street.
- (ii) The Booth Street cross-Precinct route is complete and the second cross-Precinct route on the line of Grafton Street is being considered.
- (iii) No improved connection of Cambridge Street/Lloyd Street to Whitworth Street has been carried out.
- (iv) Lloyd Street has not been realigned.
- (v) The extension to Princess Parkway through Hulme to link with Mancunian Way has been partially carried out. A dual carriageway now extends from Denmark Road to Mancunian Way but a length of single carriageway remains between Denmark Road and Wilbraham Road.
- (vi) No improvement has been carried out to Cambridge Street/Lloyd Street. However, since 1966 the capacity of Upper Brook Street and Cambridge Street has been increased a little by closing certain minor side roads and co-ordinating traffic lights, although this has had no significant effect on the density of traffic on Oxford Road.
- (vii) Of the four street enclosures recommended so far Burlington Street and Cavendish Street are legally closed.
- (viii) 'Buses-only' lanes were introduced to Oxford Road between Grosvenor Street and Grafton Street in February 1973. These are discussed further under the heading "Proposals for Public Transport."

Traffic Surveys Carried Out During 1972.

- 2.2. The City Engineer and Surveyor carried out a limited survey during the Autumn of 1972 which consisted of taking traffic counts for all turning movements (morning peak hour 8 30 — 9 30) at the following junctions:—

Upper Brook Street/Brook Street — Booth Street East/Inchley Road
 Upper Brook Street — Brunswick Street
 Upper Brook Street — Grafton Street
 Oxford Road — Grosvenor Street/Cavendish Street
 Oxford Road — Booth Street East — Booth Street West
 Oxford Road — Brunswick Street/Burlington Street
 Oxford Road — Grafton Street
 Oxford Road — Denmark Road
 Oxford Road — Hathersage Road
 Wilmslow Road — Moss Lane East
 Cambridge Street — Booth Street West
 Lloyd Street North — Burlington Street
 Lloyd Street North — Denmark Road
 Lloyd Street North/Upper Lloyd Street — Moss Lane East.

- 2.3. The relevant results of the survey are included in Appendix B. It is appreciated that since the survey was made in 1972 Burlington Street has been temporarily closed and this will have affected the traffic flow figures at other junctions. Due allowances have been made for these adjustments in the conclusions reached on junction capacities.

- 2.4. It will be noticed from the study of the results that the junctions on Upper Brook Street are generally near capacity. However, spare capacity is available at the Booth Steet West junction with Cambridge Street and along Lloyd Street North. The information is referred to again in the section on car parking.
- 2.5. The traffic capacities of the junctions have been quoted in terms of practical capacity. Spare capacity is the difference between practical capacity and existing flows. In all cases calculations have assumed that the existing approach widths remain unaltered and therefore any improvement in widths at the junctions could further improve traffic capacity.
- 2.6. The road system passing through and to each side of the Precinct serves also the central area of the City. Only a portion of the spare capacity at the junctions therefore should be used to feed the Precinct car parks. The recommendations in the later section on car park expansion are based on the premise that approximately 50% of any available extra capacity should be used for that purpose, the remaining capacity being eventually taken up by general traffic growth in the City Centre assuming a traffic growth of 2% p.a. on the main radials during the next five years.

Proposals for the Future

- 2.7. The major change from the development anticipated in the 1967 Report is that the upgrading of the peripheral roads and the construction of the Inner Ring Road are unlikely to be carried out until some time after 1984, although they still form part of the ultimate plan. The Precinct is therefore likely to exist for a considerable time with the present road system remaining substantially as it is today. Some less significant modifications to the present network are proposed for implementation before 1984 and these are described in the following paragraphs.
- 2.8. A second cross-Precinct route is being considered which would run within the reservation for the Inner Ring Road on the approximate lines of Grafton Street and Dilworth Street. However it will be for the Greater Manchester Council to decide when the route can be introduced. The S.A.L.T.S. * Group are at present carrying out a feasibility study to ascertain whether this route would provide a worth-while benefit.
- 2.9. In the same way that the main cross-Precinct routes develop, taking east-west traffic through the Precinct at strategic points, the closure of minor existing roads should be effected so that they may commence to function properly as service road culs-de-sac, the extraneous traffic being prevented from filtering uncontrolledly through the Precinct.
- 2.10. As mentioned previously Burlington Street and Cavendish Street are now legally closed. It is proposed that a rolling programme should be implemented for the closure of Brunswick Street, Nelson Street and Dover Street possibly taking place in that order.
- 2.11. Until the northbound carriageway of Upper Brook Street is completed and the route becomes 2-way into the City no consideration can be given to the closure of Grosvenor Street. At the present time the County Engineer is examining the long-term transportation problems and it has already become clear that the timing of the Grosvenor Street closure will be dependant upon the construction of the proposed City Centre Road which will replace the present "heavy load" route of which Grosvenor Street forms part.

Survey of Travel 1972.

- 2.12. A survey of travel by Precinct users was made by S.E.L.N.E.C. PTE during the Michaelmas term of 1972 and the results presented to the Working Party in a draft report in April 1973.
- 2.13. The objective of the survey was to obtain information which would provide an accurate picture of travel to the Precinct as affected by Institution, origin, modal split, arrival and departure times, frequency of services, demand for season tickets, status, car ownership, amount of on and off street parking, reasons for choice of travel, mode and attitudes to parking charges and transportation facilities. The results of the survey are shown in the following paragraphs and tabulated in Appendix C.

* S.E.L.N.E.C. Area Land - Use Transportation Study.

Modal Split

- 2.14. Comparative tables showing the modal split of journeys to the Precinct as predicted in the 1967 Report for 1972 and actual figures in the survey are shown here in Figure 2.1.

Figure 2.1.

1967 Report Predictions			1972 Survey (Table C.5)		
Mode	Number	%	Mode	Number	%
Car Driver	6,000	24	Car Driver	6,896	25
Bus)	13,150	53	Bus)	12,344	55
Train)			Train)	2,767	
Car Passenger	2,900	12	Car Passenger	853	3
Walk)	2,200	8	Walk)	3,673	16
Cycle)			Cycle)	843	
			(- 2,093 resident on Precinct)	-2,093	
				2,423	(9)
Motor Cycle	750	3	Motor Cycle	369	1
* Other			Other	52	
Totals	25,000	100%		27,797	100%

- 2.15. The predicted modal split was based on the following assumptions:—
- (i) the rise in car use by students would be the same as the estimated rise for Manchester as a whole i.e. by 45.5%, from 10% to 14.5%.
 - (ii) the rise in car use by academic staff would be by a similar percentage i.e. from 50% to 75%.
 - (iii) the rise in car use by other staff would be by a similar percentage i.e. from 10% to 14.5%.
 - (iv) the use of motor cycles would rise marginally to 5%.
 - (v) numbers cycling and walking would remain the same.
 - (vi) the percentage of students not attending would be as in 1965.
 - (vii) student cars would carry on average 1 passenger; academic staff cars 1/5 passenger and other staff 1/2 passenger.
- 2.16. Comparison of the actual predicted modal split indicates that the forecast was reasonably accurate although, for reasons set out below, the demand for parking somewhat exceeds that forecast in the 1967 Report. The forecast figures were 4,800 spaces for 1972 and 10,000 ultimately. Tables C.11 and C.12 indicate that the average number of daily car trips in 1972 was 6,600 and it can be seen from Figure C.15 that the average daily peak demand for parking spaces at that time was 6,340. These figures show a car use/parking demand factor of 96% which is higher than the 80% estimated in the 1967 Report.
- 2.17. There are several possible reasons for this more rapid growth in demand:—
- (i) The total population using the Precinct is higher than anticipated.
 - (ii) Due to increased traffic congestion the reliability of bus services has worsened more than was anticipated.
 - (iii) Public transport costs have risen more steeply than private transport costs.
 - (iv) The proportion of students using cars has risen to 19%, almost double the increase anticipated.
 - (v) Although car use by members of the academic staff has risen only to 58% rather than the expected 75%, this has been more than compensated for by the fact that 30% of other staff now drive to the Precinct compared with the 14.5% assumed.
 - (vi) The average car occupancy of 1.12 is very much lower than the 1.48 which had been anticipated. This effectively reduces the number of people carried by 24%. Indeed, if the higher level of car occupancy had been achieved then the number of people at present arriving by car could be carried in 6,200 cars. The 1967 Report states that parking for 4,800 cars would be required by 1972 if provision is made to meet demand. From tables C.11 and C.12 it can be deduced that during a 'typical' day in 1972 there were 2,380 cars parked on street and 4,220 in car parks.

* Persons who returned the questionnaires with inadequate answers.

- 2.18. The number of people travelling to the Precinct either by cycle or on foot compares very closely with that forecast in the 1967 Report. Table C.5 of the Survey indicates that 4,516 persons would travel in this way. However unlike the figure in the 1967 Report this figure includes those who are resident in the Precinct itself and after adjusting for this the comparative figures are 2,200 forecast and 2,423 actual, respectively 8% and 9% of the total numbers travelling.
- 2.19. The proportion of students not attending at any one time has fallen from 10% in 1965 to 6% in 1972.
- 2.20. An examination of Table C.5 underlines the fact that it is necessary for accurate predictions of future modal choice to be based on groups of individuals rather than upon totals. For example, although 44% of the whole population travel by bus this figure varies from 14% for Doctors to 70% for Hospital Ancillary Workers. Similar variations are to be found for all other modes. Therefore, if any group expands at a faster rate than the others this would considerably affect the requirements for travel to the Precinct.

Comments on Modal Choice.

- 2.21. Although 37% of the population of M.E.P. own cars (Table C.6) only 25% travel to the Precinct by car (Table C.5). For example, of the 2,227 Academic Staff who own cars only 1,598 drive regularly to the Precinct. It is, therefore, apparent that despite the very cheap parking facilities, various factors reduce the parking demand to 67% of car owners. Of these, only 138 state that difficulty in parking is the reason for choosing a different travel mode. Nevertheless, Tables C.5 and C.7 show that car ownership is the most important single factor affecting the modal split. It seems apparent, therefore, that with rising car ownership and population, some form of restraint on car use to the Precinct will need to be imposed. Such a course of action, however, is unlikely to be acceptable unless it is accompanied by improvements to the public transport system.
- 2.22. Table C.7 indicates that the existing services are sufficiently attractive to persuade over 2,500 car owners to travel frequently by public transport. Indeed, 35% of train passengers are 'choice' riders. This compares with only 13% of bus travellers. The benefit derived from reserved track operation is further underlined in Table C.8 which indicates that train users cite 'positive' reasons for their choice of mode, with 1,028 mentioning speed and only 119 stating that they have no alternative mode. In the case of bus passengers the figures are 562 and 5,387 respectively. It is also worth noting that only 293 car drivers indicate that their reason for choice is that there is no alternative mode available.
- 2.23. All these figures should be treated as guide-lines rather than precise figures as 39% of the sample stated that 'convenience' was the reason for their choice of mode. As 'convenience' covers such aspects as speed, reliability, frequency, comfort and lack of strain, it is not a precise term. Nevertheless, when Tables C.8 and C.9 are studied together they provide a useful guide to the attitudes of the population to various aspects of the transport system and provide some idea of priorities of use in planning changes to the modal split. For example, car drivers consider public transport to be both expensive and unreliable; car passengers, like walkers, cyclists and motorcyclists, consider public transport to be reasonably good but expensive; train passengers consider that their chosen mode is good but infrequent and expensive; bus passengers regard unreliability and cost as being the worst facets of that service.
- 2.24. Overall, the list reads:—

1. Cost	2,955	mentions
2. Frequency	3,633	"
3. Reliability	796	"
4. Good service	1,751	"
5. Poor service	1,052	"
6. Require special services	852	"
7. Free buses	810	"
8. More route information	786	"
9. Speed	671	"
10. Against one man operation	630	"

It can be clearly seen from this list that in the mind of the travelling public, attention should be concentrated on fares, frequency and reliability. However, 9,093 (33%) made no comment and parking difficulties were mentioned by less than 1% of the sample.

Season Tickets.

- 2.25. It is known from experience elsewhere that the use of pre-sold multi-journey tickets improves many service characteristics and affords substantial operating benefits provided that over 60% of the passengers use them. In this respect the results shown in Table C.10 appear to be encouraging with 77% of the existing public transport users stating that they would buy discounted season tickets. In addition, 31% of car drivers said that they would buy season tickets if available between their home and the Precinct. In all, 56% of the replies expressed an interest in season tickets which would allow a 25% termly reduction. If all these people were to take up this option the effect on the modal split would be as shown in figure 2.2.

Figure 2.2

Mode	Number (Relationship to Figure 2.1.)		% (Relationship to Figure 2.1.)	
Car Driver	4,758	(-2,138)	17%	(-8%)
Bus	14,301*	(+1,957)	52%	(+7%)
Train	4,434*	(+1,667)	16%	(+6%)
Car Passenger	521	(- 332)	2%	(-1%)
Walk	2,865	(- 808)	10%	(-3%)
Cycle	590	(- 253)	2%	(-1%)
Motor Cycle	280	(- 89)	1%	-
Others	48	(- 4)	-	-
Total	27,797			

* Estimated.

- 2.26. It is appreciated that the type of question asked tends to give over-optimistic results but even if the tickets were sold in only half the numbers predicted it is probable that there could be a significant improvement in the levels of service provided in terms of delays at bus stops.

Car Parking

- 2.27. At the time of the survey there were very few restrictions on car use and parking, there being virtually no restraint upon on-street parking and the cost of parking in car parks being relatively low. Tables C.11, C.12 and C.13 set out the position in more detail. Although the 1972 split between on-street and off-street parking appears to be fairly even (45% and 55% respectively) it should be noted that persons parking in car parks drive to the Precinct more frequently than on-street parkers, 70% of them travelling five times a week or more compared with 43% of on-street parkers. People parking in the car parks also experienced less difficulty in parking (16% compared with 29%). To meet the existing demand an additional 2,280 (96% of 2,380) spaces would be required to accommodate cars which at present park on the street (Table C.11) as parking on the roads becomes restricted. In practice, however, this number is likely to be reduced by the need to pay a parking charge.
- 2.28. Table C.13 indicates that only 20% of existing car users are prepared to pay 15p or more per day. This means that, in theory, if the charges were increased beyond this figure only some 1,250 spaces would be occupied! This is clearly unrealistic.

Origins of Travel

- 2.29. Origin maps were prepared from the survey and these have been summarised in Figure C.14 which is directly comparable with Figure 4.2. on page 20 of the 1967 Report. These indicate that there is a tendency, particularly marked in the case of students, to cluster in the south, for example only 1,010 are located to the north of the City Centre compared with 2,130 in one square mile along Wilmslow Road. Other major concentrations occur in Moss Side and Chorlton. Even the most dispersed group (staff travelling by car) is concentrated in the south.

Proposals for Public Transport

- 2.30. The P.T.E's "Public Transport Plan for the Future" outlines a public transport system appropriate to the demand throughout a period of some 25 years. Much of the document is devoted to costly large-scale schemes leading to the realisation of an integrated public transport system based on improvements to commuter rail services and incorporating a new rapid transit network. The fruition of these schemes is necessarily long-term and the plan rightly draws attention also to the need for measures to maintain and improve public transport standards in the interim.
- 2.31. Short-term measures applicable to the total bus system will benefit passengers to the Precinct. These will include improved standards of route information, waiting accommodation, continuing improvements in vehicle-types, research into alternative methods of propulsion and methods of controlling service operation to improve the regularity of bus services.
- 2.32. The two major short-term improvements, however, concern priority for buses over other traffic in peak periods and a revision of fares and fare collection systems.
- 2.33. The experimental 'buses only' lanes scheme, between Grosvenor Street and Grafton Street, introduced in February 1973, has improved the attractiveness of Oxford Road services in terms of slight improvement to journey times. However, it is inevitable that this improvement to public transport will be balanced by

an increase in traffic congestion on other highways in the area. A study is now in progress involving specialist consultants, highway authorities and the P.T.E., to establish the potential benefits, costs and feasibility of introducing bus priority measures on other radial roads on which bus journey speeds and regular operation are affected by traffic congestion. The primary aim of the study is to introduce appropriate schemes in a matter of months rather than years.

- 2.34. The introduction of 'buses only' lanes along Oxford Road accords fully with the transportation principles of the Precinct Plan, Oxford Road being regarded essentially as the main public transport route and service spine to the Precinct with frequent bus stops along its length. The southward extension of the 'buses only' lanes on Oxford Road would therefore be welcomed. However, to introduce 'buses only' lanes on either of the two peripheral roads — Upper Brook Street and Cambridge Street/Lloyd Street — would be to change radically the role of those routes whose function is considered to be complementary to Oxford Road in that they should take the faster moving private transport requiring to get to the city centre and beyond. Much as the recent emphasis on efforts to improve public transport services is to be welcomed therefore, it is clearly of the utmost importance that the effect of 'buses only' lanes on traffic improvement generally should be fully considered and that they should be introduced with careful discrimination.
- 2.35. The Executive aim to simplify the fares system so that, by the time of the introduction of an integrated bus/train system, through booking from origin to destination will be possible irrespective of the number or types of vehicle used. The introduction of the necessary simplified fares system will need to be carried out in stages.
- 2.36. It is intended to start this process in 1974 by a reduction in the number of alternative fares now applicable. At the same time, a system of pre-payment and period tickets for point-to-point travel will be introduced. Period travel tickets will result in a financial saving to their users and time saving to all bus passengers by reducing the number of on-vehicle cash transactions and, therefore, the time currently spent at stops by one-man buses.
- 2.37. The improvements outlined will apply to all public transport in Greater Manchester.
- 2.38. In considering short-term improvements in bus services to the Precinct some re-routing proposals will be effected on the closure of Cavendish Street in 1974. By transferring services from Cavendish Street to Booth Street, direct bus connections will be provided to the Precinct Centre from Chorlton, Flixton, Sale, Stretford, Crumpsall, Cheetham Hill, Moston, Collyhurst, Newton Heath, Failsforth and Oldham.
- 2.39. It has also been suggested that some bus services could be transferred from Lloyd Street/Cambridge Street and Upper Brook Street to take advantage of the Oxford Road 'buses only' lanes and give better access to the Precinct. However, it was concluded that re-routing would be to the overall disadvantage of the passengers at the present time. Investigation of the Lloyd Street/Cambridge Street diversion showed a high use of the major stops which would be missed if those services were to be re-routed via Booth Street and Oxford Road. There is only one all day service which could theoretically be diverted from Upper Brook Street via Dickenson Road or Hathersage Road and Oxford Road to take advantage of the Oxford Road 'buses only' lanes and give additional service to the Infirmary/University area. To introduce this diversion, would leave a significant length of Upper Brook Street without an off-peak bus service. However it should be noted that a high proportion of the bus services in this area already use the Oxford Road route.
- 2.40. The four other services which might be considered for alteration are peak period limited stop services, involving a total of 9 inward journeys per day. To be of value to the Infirmary/University area, additional stops would be needed. Any advantage to people using these stops would be outweighed by the extra journey time imposed on existing passengers by the introduction of those stops and an Upper Brook Street/Oxford Road link.
- 2.41. To cater particularly for the demand from the major student residential area along Wilmslow Road, an additional bus service was introduced in October 1973. This service operates between 0800 and 1800 hours, every 15 minutes in the peak period and every 30 minutes between peak periods. The route is from West Didsbury (Palatine Road/Central Road lay-by) via Palatine Road, Wilmslow Road, Oxford Road, Whitworth Street, Sackville Street to Granby Row returning via Charles Street, Princess Street, Upper Brook Street, Grosvenor Street and Oxford Road. Stops are made as follows:—

All stops between West Didsbury and Old Hall Lane.

All stops between Hathersage Road and All Saints.

All stops between Whitworth Street/Atwood Street and Sackville Street/Granby Row.

- 2.42. The service will operate only during University and U.M.I.S.T. terms. It may be used by any passenger at the existing fare levels. Prior to the general introduction of period travel tickets, tickets covering a term's travel are being sold at a discount.
- 2.43. In the long term S.E.L.N.E.C. have no doubt that they will be able to cope with the capacity requirement of the Precinct for public transport. On the basis of developing the designated car parks at ground level only—providing for 4,526 car spaces—they calculate that over the next 10 years or so the maximum number of additional people travelling to the Precinct by public transport will be 10,150.
- 2.44. The critical peak hour for public transport resources is 0815 - 0915 hours and it is estimated from the pattern of arrival times in the 1972 Travel Survey that 45% or 4,600 extra people would require public transport during this period.
- 2.45. If the assumption is made that the disposition of residences of the Precinct population in 1984 is similar to that of today, some 40% of travellers to the Precinct would originate in the area served by Princess Parkway, Wilmslow Road and Kingsway bus services and the Styal railway line. This would produce an estimated 1,850 additional passengers on these services in 1984, comprising 1,200 on Wilmslow Road bus services, 370 on Princess Road buses and 280 on Kingsway buses/Styal rail service.
- 2.46. At the current average peak hour passenger loads per bus, 93% of seating capacity, this would entail the provision of the following additional bus journeys in the morning peak hour:—
- | | |
|---------------|-------------|
| Wilmslow Road | 19 journeys |
| Princess Road | 7 journeys |
| Kingsway | 6 journeys |
- 2.47. The P.T.E. state that the provision of vehicles and staff for these journeys and for those extra journeys needed by the remaining 60% of the additional travellers to the Precinct from other origins, is well within their capacity and that the extra 19 bus journeys in the peak hour would have little effect on traffic volumes on Wilmslow Road/Oxford Road assuming that Upper Brook Street and Lloyd Street are largely left for private transport.
- 2.48. Nevertheless it is considered that success in providing sufficiently adequate, convenient, regular and comfortable travel to form a realistically attractive alternative means of transport to that by private car will depend both in the short and long term on the scale of capital investment and recurrent expenditure which central and local government are prepared to devote to public transport.

Car Parking

1967 Report

- 2.49. In the 1967 Report car parking requirements were estimated on the basis of demand. It was stated that the requirement by 1972 would be for 4,800 spaces which would entail the provision of 3,000 spaces in multi-storey form in addition to the 1,800 spaces which would remain at ground level. The ultimate demand, however, would be for the designated areas to be fully developed to multi-storey form providing about 10,000 spaces. The latter development would depend for vehicular access on the further development of the peripheral radial roads. It was presumed that there would be no on-street parking by that time.

1972 Situation

- 2.50. The actual parking situation during 1972 can be studied by reference to the following tables and figures in the Appendices.
- (i) Table D.1 — Schedules of Parking Capacities (compiled from a survey carried out by the Planning Consultants in mid-1972)

Total on-street spaces	2,540
Total controlled spaces	4,576
	7,116
 - (ii) Table C.5 — Modal Split by Status (S.E.L.N.E.C. PTE Survey of Travel 1972)

Car drivers to the Precinct	6,896
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 - (iii) Figure C.15 — Precinct Parking by Time of Day (1972)

Maximum number parked	6,340
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- 2.51. Item (i) indicates the number of spaces counted. Not all the spaces were in use and an assessment of the normal maximum numbers of cars which were parked at any one time of day during the Michaelmas Term was 6,400.

- 2.52. Item (ii) indicates the number of people travelling to the Precinct by car, This does not accurately reflect the number of parking spaces required because it does not take frequency of travel into account.
- 2.53. The 6,340 spaces referred to in item (iii) does allow for frequency of travel and is an accurate assessment of use at that time. It equates very closely to the assessment of 6,400 made in paragraph 2.52.

On-Street Parking

- 2.54. In 1972 there were an average of 2,380 daily car users who parked on streets in the area. During 1974 a large proportion of the roads which are at present used for this purpose will be controlled by 'no waiting' orders, subject to approval by the Council. Other streets will be closed as development of new buildings proceeds and most of the remaining spaces will progressively become controlled. Details of the restrictions proposed jointly by the City Engineer and the Manchester and Salford Police are shown in Appendix E. By 1974 on-street parkers will have the choice of finding space in a car park or travelling by public transport. The split in this case is very difficult to predict. It is likely that a large proportion of on-street parkers may be students who will undoubtedly be sensitive to parking charges. It is possible therefore that only a small proportion of the on-street parkers would wish to use controlled parking when the on-street spaces become unavailable.
- 2.55. As parking on the streets within the Precinct becomes restricted due to the introduction of 'no waiting' orders it is appreciated that there may be a movement of on-street parking outwards from the Precinct into the housing areas east of Upper Brook Street and west of Cambridge Street/Lloyd Street. The police suggest that it may be necessary to introduce "No Entry except for Access" orders in those residential areas but would be prepared to carry this out only when the need was proved.

Estimated Demand

- 2.56. Table D.4 shows the demand for car parking in controlled car parks both in 1973 and 1984. The figures were estimated on the basis of proportion of population using the modal split percentage (58%) for academic staff from the P.T.E. 1972 Survey (Table C.5). This percentage was applied to staff numbers only. A figure of 10% of staff spaces was taken for students and estimated visitor requirements added separately.
- 2.57. A summary of Tables D.2 and D. 4 giving comparative capacity/demand figures is shown here in Figure 2.3 to illustrate the situation.

Figure 2.3.

	Maximum Spaces in Designated Areas Developed at Ground Level.	Demand for fee paying parks.	
		1973	1984
University	1,900	2,173	3,105
U.M.I.S.T.	615	701	1,079
Municipal	420		
Polytechnic	641	881	1,295
Hospitals	950	1,316	1,365
Totals	4,526	5,071	6,844

Visitors

- 2.58. An important element of the demand for parking spaces is composed of visitors to the Precinct. An estimate of the visitor parking requirement has been compiled in consultation with the Officers of the four Institutions and is given in Table D.3. The table is sub-divided between visitors to buildings within the Institution areas which are used by the public, such as the Precinct Centre and the Museums, and visitors to the Institutional buildings themselves. With these categories there would be an emphasis on short stay parking. The total visitors demand is estimated to be about 900 car spaces in 1973 and about 1400 by 1984.
- 2.59. Because of the need for the public to be able to reach such buildings, to ensure their full and proper use, it is essential that such car parking be provided and reserved. It is therefore recommended that the Institutions should reserve the appropriate number of short-stay parking places for these purposes in the controlled park which is located nearest to the building to be serviced.

Operational Parking

- 2.60. Reserved parking spaces will also be required for those members of the Institutions and for the tenants of shops and offices within the commercial buildings who require the use of a car in the course of their daily duties. Here again, such spaces will need to be reserved in parks situated as near as possible to the buildings concerned.

Effects of Highway Network on Parking Capacity

- 2.61. When considering the number of car parking spaces which may be provided by the four Institutions of the Precinct it is important that the means of access via peripheral roads is assured. It has already been stated that by 1984 the highway network is likely to be substantially the same as it is now and that the ultimate development of the peripheral roads as postulated in the 1967 Report has very little chance of being developed until well after 1984. The present highway network is already running at near capacity during peak periods and there is thus only marginal scope for increasing the current number of car parking spaces because extra spaces generate more traffic.
- 2.62. The introduction of 'buses only' lanes may well have an adverse effect on the capacity of the roads for use by private car owners. The first of these lanes was introduced to Oxford Road throughout most of the length of the Precinct in February 1973 and no doubt some of the previous users of Oxford Road have already transferred to the peripheral roads because of the reduction in Oxford Road vehicular space. The Highway Authority is currently considering the introduction of this system to other radial routes. It is emphasised that to introduce 'buses only' lanes on either of the two Precinct peripheral roads would significantly reduce the capacity of those roads to take the free flowing private transport and thus reduce their capacity to serve the major peripheral car parks.
- 2.63. It can be seen from Figure 2.3 that there is already a slight short-fall between current demand and the numbers of spaces available for development at ground level and that this short-fall will increase considerably in future years. To satisfy demand, therefore, some of the ground level car parks would need to be developed in multi-storey form in stages up to 1984.
- 2.64. However, the City Engineer has established that the peripheral highway capacity would allow such development to take place only on the west side of the Precinct i.e. accessible from Cambridge Street/ Lloyd Street, no development of multi-storey car parks being possible on the Upper Brook Street side. The maximum increase allowable is one multi-storey car park of 1,000 spaces near the Booth Street/ Cambridge Street junction and one of 500 spaces in the south-west area of the University near the present Devas Street junction.
- 2.65. In the case of the 1,000 space multi-storey car park two alternative locations are possible; immediately north of Booth Street West in the Polytechnic area or immediately south of Booth Street West in the University area. The table shows that both Institutions have a slight short-fall in numbers of spaces but it is suggested that, because of its situation further from the City Centre bus services and railway stations, the need of the University may be the greater. However it is suggested that members of the Precinct Institutions should give consideration to the formation of a parking policy and shared facilities which would allow flexibility of use.
- 2.66. Allowing for the inclusion of the two multi-storey car parks, the total number of designated spaces in the University would be as follows:—

University Area ground level spaces		1,900
plus multi-storey car parks		1,500
		3,400
Less existing ground level spaces absorbed by the 1,000 space multi-storey car park	320	
existing ground level spaces absorbed by the 500 space multi-storey car park	285	605
Total number of spaces		2,795

- 2.67. The figure for maximum number of spaces in designated areas throughout the Precinct including the two extra multi-storey car parks would then be as shown in Figure 2.4.

Figure 2.4.

	Car Parking Spaces
University	2,795
U.M.I.S.T.	615
Municipal	420
Polytechnic	641
Hospitals	950
Total	5,421



The multi-storey car park and commercial sub-centre at U.M.I.S.T. Area B. This is the first and only such building yet to be erected in the Precinct.

Car Parking Policy Options

- 2.68. From Figures 2.3 and 2.4. it is clear that for the next few years the number of car parking spaces provided in the Precinct can range between 4,526 and 5,421.
- 2.69. The lower figure of 4,526 is already some 500 spaces short of the 1973 demand for fee paying parking according to the 1972 Travel Survey. It comprises the total capacity of all the designated ground level car parks together with the existing multi-storey car park at U.M.I.S.T.
- 2.70. The higher figure of 5,421 is the maximum number of parking spaces which can be served satisfactorily from the highway network existing in 1973 and which is unlikely to be materially improved in the foreseeable future. It increases the lower figure by the conversion of two ground level car parks adjacent to Cambridge Street/Lloyd Street multi-storey construction.
- 2.71. Although the provision of both multi-storey car parks would seem necessary to satisfy demands arising in the late 1970s, the extra spaces are not all required immediately. For the next two or three years, with arrangements for sharing, the construction of the 1,000 space multi-storey car park would satisfy the demands of both the University and the Polytechnic. Alternatively, the construction of the 500 space car park would satisfy the demands of the University alone. It should be borne in mind that it is likely to take about two years to complete the building of a multi-storey car park from the date at which a decision to go ahead is given.
- 2.72. It is recommended that before embarking on a policy of multi-storey car park construction the Institutions should consider taking the following steps:
 - (i) Explore methods of restricting the numbers of car parking spaces to the maximum which can be provided by ground level development i.e. 4,526 spaces, by such means as rationing these spaces to users with the greatest need.
 - (ii) Raise the charge made for car parking to the same level as those obtaining in the Manchester City car parks. This would enable a more realistic travel choice to be made between private and public transport and thereby almost certainly increase the incentive to use the latter. In addition the introduction of such increased charges would be a useful method of testing car parking demand.

Access for Service and Emergency Vehicles.

- 2.73. A careful study has been made of the access points and service road requirements for all types of vehicles, including emergency vehicles such as fire engines and ambulances. A series of meetings with the Police and Fire Department have been held in the presence of the Planning or Building Officers of the Institutions and one result of this which is already proving effective is the removal of on-street parking, which was seriously obstructing their essential purpose of providing vehicular access, from a number of minor roads.
- 2.74. The principle established in the 1967 Report whereby the access/service road system was complementary to but distinct from the main highway system has been followed. Thus, whereas the major vehicular movements of private cars into the Precinct are from the main peripheral routes into the large car parks flanking Upper Brook Street and Cambridge Street/Lloyd Street, the service road system of loop roads and culs-de-sac is linked primarily to the main Precinct routes of Oxford Road and Booth Street East and West.
- 2.75. Because of the need for fire engines to gain access to most of the peripheral walls of any given building, coupled with the undesirability of having large areas of tarmac, service road access is being supplemented by reinforcing certain footpaths and grassed areas which will be clearly identified in the records of the Fire Brigade.
- 2.76. In certain areas of the Precinct where the need for access is very small it is desirable on environment grounds to allow both pedestrians and vehicles to use the same paved route. In these cases it is recommended that the surface finish should clearly indicate that pedestrians have priority by using attractive materials which contrast markedly from the black tarmacadam of the normal traffic routes. This procedure has already been established successfully in both the University and U.M.I.S.T. areas of the Precinct.

Walking and Cycling

- 2.77. Over the last decade, obsession with the problems of coping with the motor vehicle has tended to relegate serious consideration for the pedestrian and cyclist to the foot of the priority table. More recently however, there have been clear signs that walking and cycling are becoming accepted as being essential features of transportation planning which should be aimed at providing the public as a whole with the most convenient and most attractive personal movement.
- 2.78. The 1967 Report stressed the importance of containing demands for increased public transport facilities and increased car parking space within reasonable limits, on social, economic and environmental grounds, by providing as many students residences as possible within the Precinct itself and within walking distance of it. Recent and current building projects inside and immediately to the south of the Precinct are implementing this policy and making it physically possible for large numbers of students to walk or cycle to their destinations without becoming involved in the congested city centre.
- 2.79. The problem of securing adequate oil supplies to continue to use the motor car for each and every journey is now adding a solid practical reason for re-examining the possibility of movement by bodily exertion for these journeys which are suitably short. Prior to this emergency careful consideration has been given on social and environmental grounds to the further development of the ground and upper level pedestrian routes and to the provision of cycle lanes and cycle stands to facilitate and encourage these less obstructive forms of movement about the Precinct. Because of the inter-relationship of these routes with the landscaping of the open space system the proposals which are the outcome of this consideration are described in Chapter 3.

3 The Environment



Summary

This chapter is concerned with the design and landscaping of the open space system which encompasses and unites the whole Precinct, including the network of all non-vehicular routes which thread through it — ground and upper level footpaths and ground level cycle lanes.

The principles and importance of achieving maximum possible segregation of pedestrian routes from vehicular routes are stressed and the application of these principles to the Precinct in the form of both horizontal and vertical segregation according to circumstances, as recommended in the 1967 Report, is re-stated.

A full description of the main public pedestrian routes which pass through the Precinct is given under the headings of north-south and east-west directions; the north-south routes linking Whitworth Park with the University, the Polytechnic, U.M.I.S.T. and the city centre and the east-west routes facilitating cross-Precinct pedestrian movement from the Brunswick and Hulme residential areas.

Progress made with the construction of both the main and subsidiary pedestrian routes is recorded and compared with the 1967 Report proposals. The implementation of the upper level walkway system is described in some detail and attention is drawn to variations from the 1967 proposals, particularly in the University Medical School/Students Union area. The basis of agreement regarding the use, maintenance and costs of the upper level walkways which has been drawn up by the University and the City Corporation is recorded.

It is suggested that the use of bicycles for travel to and about the Precinct should be encouraged and that in addition to the existing facility for cycles to use the 'buses only' lanes along Oxford Road and the service roads, special cycle lanes should be established alongside certain of the main footpaths connecting with a series of cycle stands distributed about the Precinct close to those buildings which are likely to create the greatest demand.

A policy and procedure for landscape design and construction throughout the Precinct, based on the Landscape Policy Report of July 1973, is described and particular reference is made to the comprehensive Landscape Structure Plans; the first programmed for 1978 and the second postulating the proposed ultimate development of the Precinct, which embody all the environmental components dealt with in this chapter.

Illustrations of the Pedestrian Network and Cycle tracks are shown in Appendix A, Figures A6 and A7. The Landscape Structure Plans incorporating these elements are shown in Figures A10, A11 and A12.

The Principles of Segregation.

- 3.1. The 1967 Report recommended the establishment of a main pedestrian network segregated from vehicular traffic so far as possible and including a system of upper level walkways in certain parts of the Precinct. It is considered that both the principle of segregation and the main lines of the proposed pedestrian network remain valid. The segregation of pedestrians from vehicular traffic in urban centres is now accepted in this country as being a particularly desirable objective, both from the point of view of safeguarding life and limb and in obtaining a high quality of environment. During the last decade verbal exhortations and paper schemes have been followed by many excellent working examples of horizontal and vertical segregation. There are now few towns and cities which cannot show either traffic-free shopping centres or segregated systems over large areas, or both, and many more such projects are either under construction or being planned. It is one of civilisation's solutions to the problems of living with the motor vehicle.
- 3.2. Irrespective of the extent to which the peripheral radial routes of Upper Brook Street and Cambridge Street/Lloyd Street may in future be up-graded to take fast moving traffic into and out of the city (and as stated in Chapter 2 such up-grading is unlikely to take place until after 1984) Oxford Road will continue to carry a heavy volume of traffic in the form of buses serving and passing through the Precinct, service vehicles, taxis and a proportion of private cars. Booth Street, which has recently been widened to dual carriage way to become the main local cross-Precinct route, will also carry a considerable traffic load of a similar character to that of Oxford Road.
- 3.3. The only other routes which cut right through the Precinct are Mancunian Way which, being itself at an upper level allows both local vehicles and pedestrians to pass beneath it, and the proposed Inner Ring Road. The latter is scheduled to cross the Precinct immediately north of the Hospitals and the University Southern Area at some undefined future date and is expected to be in cutting where it crosses Oxford Road.
- 3.4. It should be stressed that the need to cross the heavily trafficked ground level roads — Oxford Road and Booth Street — has been and still is the main determinant of the extent of the Upper Level Walkway

system. In view of the misconception which apparently exists in some quarters about the reasons for advocating an upper level walkway system in these parts of the Precinct the principle is re-stated in the following paragraphs.

- 3.5. All buildings, of necessity, incorporate circulation systems — corridors and halls, staircases and lifts, and the requirements for a continuous walkway merely implies that each building should be so designed as to provide for its circulation system being linked to adjacent buildings for the convenience of its users. When the buildings concerned are multi-storey, belong to one or other of the Precinct Institutions and form part of a comprehensive educational development, it would seem to be unreasonable to insist that their occupants should all descend to ground level and cross heavily trafficked roads when wishing to walk from one building to another. Continuity of communication at an upper level, preferably under cover, is very desirable. The bridges between Manchester Town Hall and the Town Hall Extension provide a local precedent.
- 3.6. It should be made clear, nevertheless, that ground level footpaths are also being strengthened to provide an attractive pedestrian network throughout the Precinct with links to the adjoining residential areas of Brunswick and Hulme. These routes cross Oxford Road at light-controlled surface crossings and are linked to the upper level walkway systems at strategic points.
- 3.7. In the 1967 Report it was proposed to achieve the segregation of pedestrians from vehicles in different ways in different parts of the Precinct:—

Around Owens.

In those areas around Owens where considerable building had already taken place and all the buildings have their main entrances at ground level, for example in the Science area, it was considered that the only possibility was to achieve segregation on a horizontal plane. There might be one exception to overcome the barrier of Oxford Road which divides Owens from the Science area. In this case it was suggested that a subway be introduced to link these areas across Oxford Road once Brunswick Street had been closed.

Between Owens and All Saints

In what was to become the heart of the Precinct between Owens and Grosvenor Square (All Saints) it was considered that vertical segregation was greatly to be preferred and eminently feasible because of the comparatively small amount of building then carried out in this area. A key part of the upper level pedestrian system, therefore, was to extend from south to north between the Mathematics Building opposite Owens and the College of Adult Education in Grosvenor Square and from east to west connecting the car parks alongside Upper Brook Street with those alongside Cambridge Street, both these routes crossing in the Precinct Centre Building, the shopping concourse of which was to bridge Oxford Road.

South of Owens

To the south of Owens and the Science area it was again considered desirable to establish an upper level system. It was proposed to link the Student Union Extension on the west side of Oxford Road with the Medical School on the east and to continue the route along the south face of the Medical School to connect with the car park in Upper Brook Street. It was also to be linked at two points to the Hospitals over the proposed Inner Ring Road on the line of Grafton Street. A further development southward of the upper level system was proposed from the Union Extension over the cross-Precinct route into the Southern Residential Area.

North of All Saints

To the north of Grosvenor Square (All Saints) it was recommended that an upper level walkway system should be adopted to give a route free of vehicular traffic which would ultimately link the University and the City Colleges with Oxford Road Station. One of the main reasons for advocating this system was that a large number of students and staff walked to the City Colleges and the University from Oxford Road Station in the morning and back again in the evening of every working day. Descent to ground level on the west side of Oxford Road was inevitable at Grosvenor Square but on the east side it could be continued southward without a break, via the bridge link proposed at what is now to be the Polytechnic Central Building, through the future Sports Centre to the Precinct Centre.

Between Precinct Centre and U.M.I.S.T.

North-east of the Oxford Road/Booth Street crossing it was considered appropriate that pedestrians should move at ground level between the Precinct Centre and U.M.I.S.T. via the Student Quarter and the Mancunian Way footpaths. This route could eventually connect the Precinct to Piccadilly Station by extending it through the U.M.I.S.T. campus to the north-east.

The Major Public Pedestrian Routes

The north-south routes

- 3.8. Along Oxford Road, which will cater more and more for public transport, taxis and vehicles serving the buildings within the Precinct, there will be greatly improved ground level footpaths on either side of the carriageway, landscaped at many points and set back some distance from the edge of the carriageway wherever possible. These footpaths will be in addition to the footpaths still required immediately alongside the all purpose carriageway. Examples of this improved treatment can be seen immediately south of the Precinct Centre and along the frontage of the Royal Northern College of Music on the west side of Oxford Road and in the form of a public square in front of the new Church and Chaplaincy on the east side.
- 3.9. On lines approximately midway between Upper Brook Street and Oxford Road and between Oxford Road and Cambridge Street/Lloyd Street there will be established two new north-south footpath routes which will pass through landscaped open spaces completely independent of vehicular roads, the former linking the new Medical School to the Precinct Centre and the different areas of U.M.I.S.T. and the City; the latter linking the Arts area with the Main Owens Buildings and the Precinct Centre.
- 3.10. The north-south upper level route between Owens and the Polytechnic via the Precinct Centre is described later in this chapter.

View of Brunswick Street and its buildings looking west towards Owens .

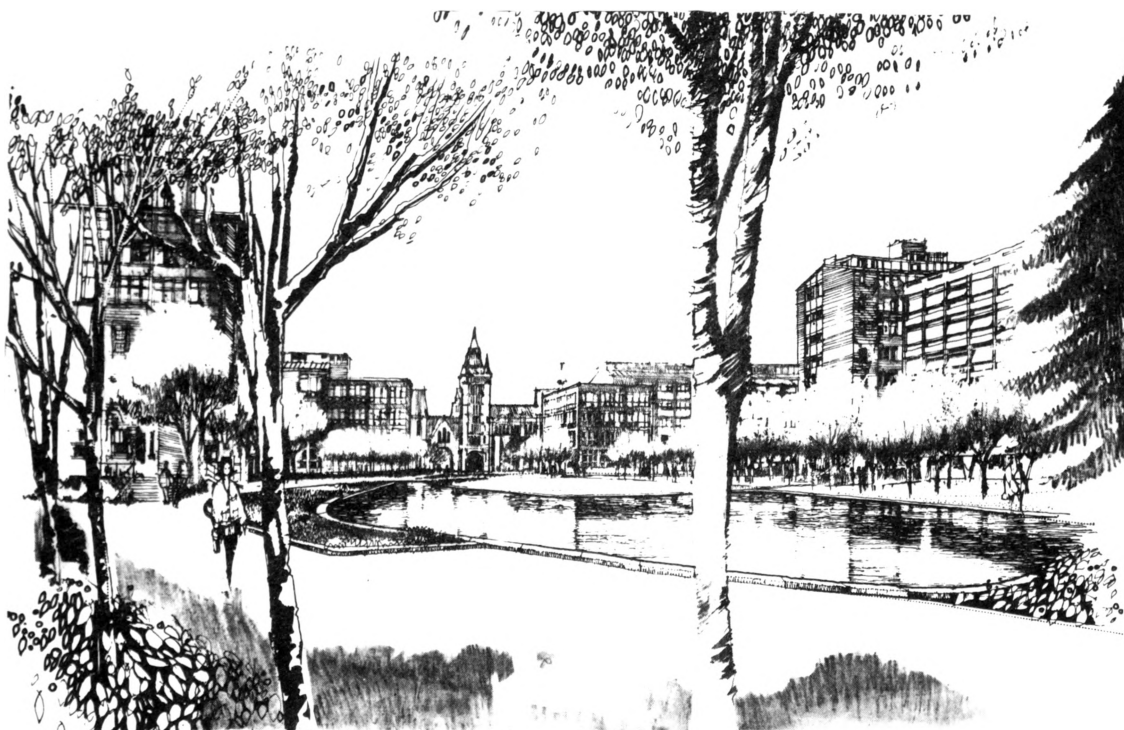


The east-west routes

- 3.11. Special emphasis was given in the Final Report to the desirability of linking town and gown, both socially and physically, and to assist in this endeavour it was recommended that vehicular and footpath links should be provided into and across the Precinct from the large newly developed residential districts of Brunswick and Hulme.
- 3.12. In terms of vehicular roads taking major bus routes, Booth Street was selected to become the principal east-west line of communication linking Brunswick and Hulme to the Precinct and through the Precinct to the City. The selection of Booth Street as the main cross-Precinct route for public transport and inter-district traffic and its consequent substantial up-grading envisaged the ultimate closing of Brunswick Street (west of Upper Brook Street) and Burlington Street (east of Lloyd Street) which pass mainly through areas of academic building set in generous landscape.
- 3.13. The intentions in the Final Report were that Brunswick Street should be replaced by a broad walk set in what would become the largest landscaped open space in the University part of the Precinct – a park-like space open to the public and academics alike and giving a fine setting to the post-war Science buildings and exceptional views of the newly cleaned Owens. Just as it is now proposed that Grosvenor Square should become the main focus for the Polytechnic, so this new Science Quad would become the main focus for the University.
- 3.14. As well as providing for greatly improved east-west vehicular movement, the recently completed Booth Street also provides generous ground level footpaths across the Precinct on each side of the carriageway, in addition to the main east-west upper level covered pedestrian way which is incorporated within the Precinct Centre and other buildings lining the road. The Oxford Road/Booth Street crossing thus becomes a 'cross-roads' both for vehicular traffic and for ground and upper level pedestrian ways. At the extreme east and west ends of the upper level cross-route provision will be made for extensions bridging over Upper Brook Street and Cambridge Street into the Brunswick and Hulme districts.
- 3.15. As the implementation of the Precinct Plan has proceeded it became evident that further east to west pedestrian cross-Precinct routes, related specifically to the Hulme and Brunswick residential areas, should be defined:

The part of Hulme which most influences the footpath requirements through the University is the area bounded to the west by Princess Road extension, to the north by Stretford Road and to the south by a line which is proposed for the Inner Ring Road. The many footpaths in that part of

Proposals showing Brunswick Street closed and the area transformed into a landscaped space with lakes.



Hulme are collected by the main routes, Dunsop Walk, Crowborough Walk, Brackenbury Walk and Epping Walk which in turn are collected by the footpaths on Boundary Lane. Whilst the desire routes of people approaching the University will undoubtedly be influenced by the positions of local facilities such as shopping centres and schools, the cross-Precinct route from Boundary Lane which is nearest the "centre of gravity" of Hulme and which is thus likely to be most used is Booth Street. This is a direct cross route which, as previously explained, passes through the commercial centre of the Precinct and connects with the upper level system. The two other existing routes from Boundary Lane, west of Lloyd Street, are Coupland Street and Burlington Street which appear to be equally convenient for serving the southern part of Hulme.

Much of the footpath network of Brunswick is collected by Brunswick Street which forms a central spine to the development in an east-west direction. However, the footpaths in the north-west of Brunswick are connected to Kincardine Road and those in the southern sector connect rather indecisively to Upper Brook Street and Plymouth Grove. There can be little doubt that the Brunswick Street line will remain a much used route for pedestrians wishing to enter or cross the University campus but Booth Street (via Inchley Road and Kincardine Road) is also likely to become well used.

To ensure the maximum convenience for pedestrians on the closure of Burlington Street a new route has been established on the line of the former Lime Grove, extending to Lloyd Street along the south side of the existing Library. The pelican crossing outside the Refectory on Oxford Road is ideally placed to link this proposed new route on the line of Lime Grove with Brunswick Street. This new route is fairly close to Burlington Street and in the short-term will be convenient for people coming from Hulme via Burlington Street (west). It would be possible to provide an alternative footpath across the landscaped area which has been formed by the City on land south of Burlington Street (west). This landscaped area, together with land north of Burlington Street, is eventually required for school playing fields and this may involve the closure of the remaining part of Burlington Street between Boundary Lane and Lloyd Street. In this event a footpath across the area will need to be retained on a line to be agreed.

In addition to the Lime Grove route Bridgeford Street, which has recently been legally closed and in future will not be available for through vehicular traffic, could be retained as a public pedestrian route. The University has already redeveloped Coupland Street as a major footpath and cycle route, removing all car parking therefrom. This will become a particularly convenient and direct cross-Precinct route, linking via a further pelican crossing of Oxford Road to the Brunswick Street footpath system.

In the northern part of the Precinct, the closure of Cavendish Street to vehicular traffic will enable it to become a greatly strengthened and much more attractive, direct pedestrian route between Hulme and the Precinct.

- 3.16. The establishment of these pedestrian routes will confirm the expressed policy of the Education Precinct Plan to encourage free movement for the public through the campus. Attention will be focussed on these routes by clear sign-posting and good illuminations during the hours of darkness.

Implementation of the Segregated Pedestrian System

Around Owens

- 3.17. In the area around Owens where it was suggested that pedestrian routes should have ground level (horizontal) segregation from the road system, many of the paths are now in existence and working well. This applies particularly to the north-west area around Arts, Humanities, Joint Matriculation Board and University Library Buildings. The temporary closure of Burlington Street to through traffic has greatly facilitated pedestrian and vehicular movement particularly around its previous junctions with Lloyd Street and Oxford Road, the serious pedestrian/vehicle conflict at the latter being materially reduced.
- 3.18. The Lime Grove pedestrian way has been extended to Lloyd Street along the south face of the Library as an alternative east-west footpath in readiness for the construction of the Library extension across Burlington Street. In addition, Coupland Street has been remodelled to provide a more attractive landscaped route for walkers and cyclists, car parking being removed.
- 3.19. In the Science area, east of Oxford Road, railings have been removed along the frontage to Brunswick Street and a diagonal footpath has been constructed from the foot of the Maths Ramp to the Brunswick Street footpath, the area around it being landscaped. This work anticipates the closure of Brunswick Street which should be accomplished as soon as possible.

Between Owens and All Saints

- 3.20. It is in this area, at the heart of the whole Precinct, that many threads of the pedestrian network are

now being drawn together. A substantial portion of a complex of contiguous buildings linked by both ground and upper level walkway systems has recently been completed — the first fully integrated portion of the 1967 design concept. As no less than five firms of architects have been involved in this complex, which comprises Maths, Computer, Church and Chaplaincy, Precinct Centre 1 and 2, Business School and College of Music, its physical completion may be considered to be a remarkable achievement.



University Mathematics Building. The first fully integrated portion of the 1967 design concept of the walkway system. Here the ramp through the Maths building links important ground level routes with the upper level walkway.

The Precinct Centre with Chaplaincy square in the foreground.



- 3.21. Precinct Centre 2, the Church and Chaplaincy and the north face of Computer form three sides of a paved and landscaped square open to Oxford Road — a fine urban setting to these important buildings and a pleasant place in which to sit and wait for a bus in the afternoon sunshine. It is here, in this square, that the way in which the upper level walkway system works will be most evident. Not only are the escalators clearly visible and accessible but in addition an imposing flight of steps rises from the ground to the Church entrance at +10 feet level. From a spacious landing outside that entrance a further flight of steps leads to the walkway at +20 feet level.

- 3.22. Ground level pedestrian routes lead from the Chaplaincy square through Precinct Centre 2 to Booth Street East to link with the gradually materialising footpath through the U.M.I.S.T. Student Quarter (Grosvenor Place) to the U.M.I.S.T. main campus. These routes connect with the road system at points convenient for bus stops on Oxford Road and Booth Street.
- 3.23. The bridge link between Precinct Centre 1 and the College of Music was completed in the Spring of 1974, whilst at ground level the new spacious pathway, protected from traffic by trees and other landscaped features, has transformed the Oxford Road frontage of the College.
- 3.24. The urgency for completion of the missing links in the upper level walkway cannot be overstressed in the effect it has on attracting further lettings of the shops. Further links which are crucial to the system are the ramp to ground level from Adult Education at All Saints and the link between Adult Education and the College of Music. However, despite their absence the main shopping square on the upper level is already thronging with people at certain times.
- 3.25. Precinct Centre 2 has been designed to provide for the continuation of the upper level walkway northward across Booth Street East to the Museum of Science and Industry, Sports Centre and the Polytechnic and eastward through Precinct Centre 3 to the Upper Brook Street car park.
- 3.26. On the west side of Oxford Road north of Owens the upper level system will commence with a ramp within the proposed Manchester Museum Building — complementing the ramp in Maths — and continue through the proposed Economics and Social Studies Building to link with Precinct Centre 1. The incorporation of a bridge link across Oxford Road between the proposed Economics Building and the existing walkway in the Computer Building, as indicated on the 1967 Plan, is still considered to be desirable.

South of Owens

- 3.27. The bridge link proposed across Oxford Road immediately to the south of Owens was intended to form an integral part of an eastward extension of the University Refectory. Suggestions for providing additional dining, social and ceremonial facilities in this extension, linked to Whitworth Hall, were made in paragraphs 8.20 to 8.23 of the Final Report. At the present time no firm proposals nor timetable have been formulated for these facilities, but it is considered to be of the utmost importance to keep open the option for so doing, not only because of the valuable accommodation that can be provided in this way but also because of the need to create building forms which will successfully frame the large quadrangle which is developing opposite Owens.
- 3.28. Further south, in the Medical School (Stopford Building), Students Union, Southern Residential, Hospital area certain changes in the upper level pedestrian circulation from the proposals in the 1967 Report are proposed. The changes are caused by significant modifications in the design of some of the buildings involved and the possibility that the Grafton Street cross-Precinct route shown in that Report may become part of a city Inner Ring Road, a much larger scale highway, at some undefined future date.
- 3.29. In considering the detailed design of the large Medical School project it was not felt to be desirable to include the lengthy upper level route on the south face of the building from Oxford Road to the Upper Brook Street car park. It was recommended instead that there should be an upper level link between the car park and the Medical School extended to connect with the eastern of the two bridge links to the Hospitals over the Grafton Street cross-Precinct route or Inner Ring Road. Provision was also made for a bridge link from the south-west corner of the Medical School across Oxford Road and connecting with the western bridge to the Hospitals.
- 3.30. In addition, the accommodation programme for the Students Union Extension and the Arts (Music and Drama) buildings proved to be substantially smaller than anticipated at the time of the 1967 Report. These factors, coupled with the desirability of avoiding a long continuous building frontage to Oxford Road south of the existing Union and opposite the long frontage of the Medical School, caused a reappraisal of the planning briefs for these buildings. The revised briefs provide for the incorporation of a paved and landscaped square opening off Oxford Road opposite the Medical School and framed by the south elevation of the Union Extension, the north face of Music and Drama and the east front of the Theatre. This disposition is considered to be a considerable environmental improvement. The whole of the University South-West Area, therefore, continues the ground level pattern of pedestrian/vehicular circulation which is maintained around Owens and the Science Area.
- 3.31. In considering the layout of the Southern Residential Area provision has been made for convenient short term and long term ground level footpath links with the University South - West Area. An upper level walkway within the commercial portion of the residential area is designed to connect with a

pedestrian bridge across Oxford Road, conveniently serving bus stops on either side and thus being of use to Hospital visitors also.

North of All Saints

- 3.32. A substantial part of the upper level walkway from the College of Music to Oxford Road Station is dependant on the development of the Polytechnic. The Central Building on the north side of Grosvenor Square, which is at present under construction, will eventually incorporate a key element in this part of the system. This will consist of an external lift and staircase adjacent to Oxford Road giving access to the upper level walkway which will bridge the road at this point to link the Central Building with the proposed Community Studies Building on the east side of Oxford Road facing the square. The completion of this part of the walkway should be synchronised with that of the Community Studies building. The walkway continues southwards through the Sports Centre and Museum of Science and Industry to connect with the Precinct Centre.
- 3.33. Whilst this part of the upper walkway system will not be fully effective until the southward links to the Precinct Centre are complete, the initial bridge link between the Central Building and the Community Studies Building will serve a very useful purpose for Polytechnic staff and students.
- 3.34. Implementation of the walkway connection between Central Building and John Dalton Building and its continuation to Oxford Road Station is dependent on the timetable for the redevelopment of the area north of Chester Street.
- 3.35. The site between Adult Education and the College of Music on the west side of Oxford Road is included in the Polytechnic Development Plan. From the point of view of gaining the maximum efficiency from the main upper walkway system around the Precinct Centre it is important that this site is developed, to connect these two buildings, at the earliest opportunity. Of equal urgency is the construction of the ramp to ground level from the Adult Education Building at All Saints.
- 3.36. With the developing pattern of rear service roads Grosvenor Square itself, the focal point of the whole Polytechnic, is to become primarily a landscaped pedestrian area, Cavendish Street, Lower Ormond Street and Loxford Street being closed to all but emergency vehicles. By carefully relating the design of this major open space to that of the new buildings around it there should be created here one of the finest urban squares in the north of England.

Between Precinct Centre and U.M.I.S.T.

- 3.37. To the north of Precinct Centre 2 on the east side of Oxford Road are sites earmarked for the North Western Museum of Science and Industry and a regional Sports Centre. Both projects are in the U.M.I.S.T. area of the Precinct for which U.M.I.S.T., the University and the City share responsibility. The Hospital and Polytechnic are also participating in the Sports Centre scheme. Both will serve the general public as does the Precinct Centre itself. Each building is being designed to incorporate a northward continuation of the upper level walkway system with principal entrances at that level. The Polytechnic Community Studies building is being designed to incorporate the walkway link between the Sports Centre and the Polytechnic Central Building.
- 3.38. Apart from these buildings along the Oxford Road frontage the remainder of the U.M.I.S.T. Student Quarter is served by pedestrian routes at ground level. A diagonal footpath is already largely complete leading from the Booth Street East entrance to the Precinct Centre through Grosvenor Place residences towards the existing footpath system under Mancunian Way which gives access to the U.M.I.S.T. main campus. The need to complete the missing section of this footpath is an urgent one and should not prove difficult to accomplish in the near future.
- 3.39. Inside the main U.M.I.S.T. campus the ground level footpaths on either side of Sackville Street and on the south side of Charles Street, together with the pedestrianised Altrincham Terrace, will remain to form the main links between the various parts of the campus and with the city centre. The footpath on the east side of Sackville Street already extends southward passing under the Mancunian Way/ Princess Street interchange to link with the Student Quarter and beyond to the Precinct Centre.
- 3.40. On the west side of Sackville Street a broad pedestrian ramp and the proposed amphitheatre steps will lead from street level to a first floor level concourse giving access to the Mechanical Engineering Building. Future buildings in this area will use this upper level for access to their main entrances, reserving the ground level road network for service vehicles. From this concourse routes will be established leading northwards across Charles Street by ramped footbridge to the multi-storey car park and southwards through the courtyard of the Mechanical Engineering Building connecting by ramp to the Mancunian Way footpath system.

The Hospitals

- 3.41. Apart from the essential upper level walkway links with the Medical School, and the bridge link across Oxford Road to the sub-centre of the University southern residential area and bus stops, which have already been described, the footpath system within the hospital area of the Precinct is largely self-contained and thus can be determined by its own evolving development plan.

Use and Maintenance of the Upper Level Walkways

- 3.42. In the Final Report the use of the upper level walkways was considered only in general terms. No recommendations were made at that stage as to whether they should be dedicated as highways, available for 24 hour use each day, or whether there should be other limitations. Neither were proposals made in regard to responsibility for capital and maintenance costs. Since then these issues have been fully discussed by the constituent parties to the Precinct Plan. For locational and building programming reasons the University have made more progress with the upper level walkways than any of the other Institutions and are therefore the first to have made agreements in respect thereof with the City Corporation. It is expected that the other bodies will make similar agreements at the appropriate time.
- 3.43. In the case of the University it has been agreed that whilst "no dedication of the walkways shall be constituted" they will "at all times" leave them open and allow free access to and use of them by the general public, the rights of the public being deemed to be enjoyed by the specific licence and consent of the University.
- 3.44. The Corporation make a contribution towards the cost of maintenance, cleansing and the installation and maintenance of lighting equipment. The Corporation also make a contribution towards the capital costs of bridging highways such as Oxford Road and Booth Street. The City Engineer and Surveyor has imposed certain conditions in respect of the design of the lighting, the most important of these being that the fittings should be located in situations which will not only give a high standard of lighting but will be out of reach of the users to minimise damage through vandalism.
- 3.45. The walkways will be patrolled by the Police in the same way as if they were ground level highways, but in these days of deteriorating standards of behaviour it is probable that this limited control will need to be augmented if adequate security is to be maintained.

Cycle Routes

Planning Principles

- 3.46. There can be little doubt that both in the interests of reducing the pollution and dangers of motor traffic to a minimum and in making travel about the Precinct more convenient and more attractive the use of bicycles should be encouraged. Additional advantages are that the Precinct and surrounding land is exceptionally flat and that cycling, like walking, is a healthy exercise provided one is not travelling amongst petrol fumes. To become well used, cycle routes must be attractive.
- 3.47. Because of the potential indirect savings in road construction and public transport by increasing travel by bicycle, the capital cost of constructing special cycle tracks in parts of the Precinct might be considered as money well spent. Nevertheless it is not thought to be economically or physically practicable to superimpose an entirely new system of cycle routes over the whole area of this redeveloping urban Precinct as might be possible on a virgin site. It is therefore recommended that the design of the cycle routes should be adapted to the characteristics of the various parts of the Precinct through which they pass.

Oxford Road

Oxford Road is such a direct route and connects so large a number of student residences with the Precinct that, despite the volume of motor traffic it carries, it will continue to attract the cyclist to use it. Cyclists are allowed to use the 'buses-only' lanes, which enables them to travel faster and with less harm from pollution and less danger than in the middle lanes. As the 'buses-only' lanes become extended further south so will the conditions further improve.

Minor Highways and Service Roads

Where convenient and attractive to cyclists, these routes may be used without forming either a specially designed track or a specially identified surface.

Alongside Footpaths

It is not considered practicable, as a general rule, to provide cycle routes entirely separated from the main pedestrian ways because to do so would fragment the landscaped areas to an unacceptable degree. It is therefore recommended that where it is desirable to have cycle routes elsewhere than

on the roads they should be located quite close to the footpaths. It is undesirable on safety and amenity grounds for cycles to be used on the footpaths themselves.

- 3.48. In contrast to the car, which is mainly used for journeys between residence and Precinct and between Precinct and other places of work, cycles are a particularly useful mode of travel between the various parts of the Precinct itself. In order to give the fullest encouragement to the use of cycles it is therefore necessary that cycle stands, protected from the weather, should be provided in convenient locations near to the entrances to the more heavily populated buildings or building groups.

Proposed Cycle Routes

North-South movement

- 3.49. In addition to allowing cycles to use the 'buses-only' lanes along Oxford Road, alternative routes are suggested through the landscaped areas remote from vehicular traffic.
- 3.50. It is suggested that a cycle lane be incorporated immediately adjacent to the main footpath leading from the south-east corner of Whitworth Park at the Oxford Road/Moss Lane East junction, through the Park and continuing through the Southern Residential Area to bridge over the sunken Inner Ring Road. From this point the route continues between Humanities and the Joint Matriculation Building and northwards through the University Arts area to connect with Coupland Street where it would connect with this main cross-Precinct pedestrian/cycle route.
- 3.51. North of Booth Street West a route uses the Chatham Street service road west of the Polytechnic buildings, as far as Loxford Tower, the student Hall of Residence flanking Mancunian Way, with links to the other Polytechnic buildings via the service roads and Grosvenor Square.
- 3.52. On the east side of Oxford Road a loop system of cycle lanes serves the Hospitals from two entry points on Oxford Road and one on Hathersage Road. North of the Inner Ring Road another route branches off Oxford Road immediately north of the Medical School (Stopford Building) and runs northward through the proposed open space at the east end of the Holy Name Church, through the landscaped spaces within the University Science Area, turning into Rumford Street service road north of the Roscoe Building. From here it crosses Booth Street East and, continuing along the service road between Grosvenor Place and Metallurgy, it crosses Upper Brook Street to link with the footpath under Mancunian Way and thus connects with the service road system within the U.M.I.S.T. campus.

East-West movement

- 3.53. Cross-Precinct cycle routes which link with one or other of the north-south routes and connect with Oxford Road include the following:—
- A link from Oxford Road to the route through the University Arts Area via the Students Union.
 - A route along Burlington Street to the Library.
 - The main route of Coupland Street, crossing Oxford Road and continuing through the University Science Area, with bridge links or subways across the peripheral roads of Cambridge Street and Upper Brook Street to Hulme and Brunswick. Booth Street East and West.
 - A route adjacent to the main footpath-link which replaces Cavendish Street and Grosvenor Street crossing the main peripheral roads by bridge or subway.
- 3.54. Cycle stands are located in strategic positions throughout the Precinct along, or at terminal points of, the cycle routes, the selection of these points being based on the likely heaviest demands and the need to give reasonable security for the cycles.

Landscape Policy and Structure

Procedure

- 3.55. The gradual replacement of the closely-knit pattern of obsolete housing by the large scale development of the 280 acre Manchester Education Precinct has now reached the stage when special emphasis needs to be given to the landscaping of the extensive series of open spaces which are being created.
- 3.56. It is considered that landscape design for such a large and complex area should be carried out in four stages:— firstly, the establishment of a basic Landscape Policy throughout the Precinct; secondly, the drawing up of comprehensive Landscape Structure Plans; thirdly, the preparation of Landscape Design Briefs for each open space; and lastly, the detailed landscape design of each open space within the framework of the Policy, the Structure Plans and the Design Briefs.
- 3.57. The first two stages would be the responsibility of the Precinct Joint Committee, whereas the last two would be initiated by the Institutions concerned.

- 3.58. A report on Landscape Policy, dated July 1973, has been prepared and after consideration by the Officers of the various Institutions, including the City Planning Department, was submitted to the Precinct Joint Committee in November 1973. Based on the Landscape Policy Report, two draft Landscape Structure Plans, the first programmed for 1978 and the second postulating the proposed ultimate development of the Precinct were presented to the Joint Committee at the same meeting.
- 3.59. The major items in the Landscape Policy Report; the two Landscape Structure Plans; large-scale plans of selected areas; and a series of plans illustrating the separate elements comprising the composite Structure Plans are embodied in the Plan Review.

Design Principles

- 3.60. The 1967 Report stressed the vital importance of landscaping — using the term in the widest sense — in giving an over-riding coherence to the Precinct as a whole. It stressed the need for special care to be given to the treatment of the spaces between the buildings, which should form a unifying and continuous network of routes and greens along and through which people will pass as they move about in the Precinct. It emphasised that it is not just a matter of planting, but of a comprehensive approach to the relationship of surfaces and elements — buildings and pavings, pedestrian routes, roads and car parks, walls and balustrades, steps and ramps, groups and lines of trees, grass and ground cover planting, water features, directional signs, lighting, seats and cycle stores — all the ingredients of the urban scene.
- 3.61. This theme was developed in more detail in Implementation Report No. 2 'Building Materials and Landscape' and many of the recommendations made therein either have been, or are in process of being, carried out. An air of coherence and maturity of landscape is now particularly apparent in Area A of the U.M.I.S.T. campus, perhaps more striking there because of its compact form. The quality of treatment both in the geometrical squares of the interior and in the frontages to London Road and Mancunian Way, where the planting merges imperceptibly with the City's highway landscape, is high and is effectively inter-related, thus forming delightful settings for the buildings. The resulting atmosphere of tranquillity strikingly expresses the design priority for people over traffic. With the recent completion of more buildings a similar coherence between spaces and building forms is beginning to emerge in certain parts of the larger University campus.



The landscaping in the front of U.M.I.S.T. Chemistry Building merges imperceptibly with that of Mancunian Way, shielding the buildings from the view and noise of traffic.

- 3.62. A prime requirement is the establishment of a strong unifying landscape framework for the whole Precinct within which a high degree of individuality and variety of treatment of the many open spaces can be contained. The proposals which follow are designed to meet this objective.

The Peripheral Vehicular Routes

- 3.63. The scale of the peripheral vehicular routes of Upper Brook Street and Cambridge Street/Lloyd Street as ultimately to be developed is such as to make their containment within a heavily tree planted landscape particularly appropriate both from the point of view of their becoming urban parkways in themselves and of protecting the Precinct and housing areas on either side from the visual and aural intrusion of the high volumes of traffic which will be travelling along them.
- 3.64. It is therefore proposed that these routes should be planted with belts of forest trees, the belts thickening out at strategic points such as the meeting of cross-Precinct vehicular and pedestrian routes to give emphasis thereto and further strengthened by dense ground cover planting.
- 3.65. The earth mounding currently being used in connection with the ground level car parks forms an excellent visual and noise screen and it is proposed that the mounding be developed to a larger scale concurrently

with the development of the multi-storey car parks and other major peripheral buildings, thus ensuring that the scale of highways, buildings and landscape are suitably related to each other.

- 3.66. Careful massing and selection of plant material and planting of recognisable belts of tree species will materially assist in giving continuity and variety to these parkways. It is in these thickly planted 'nature corridors' particularly that ecological development can be encouraged by providing climatic shelter and protection, creating nesting sites for birds and providing food plants. They could become the large scale urban equivalent of the hedgrows of our rapidly dwindling country lanes.

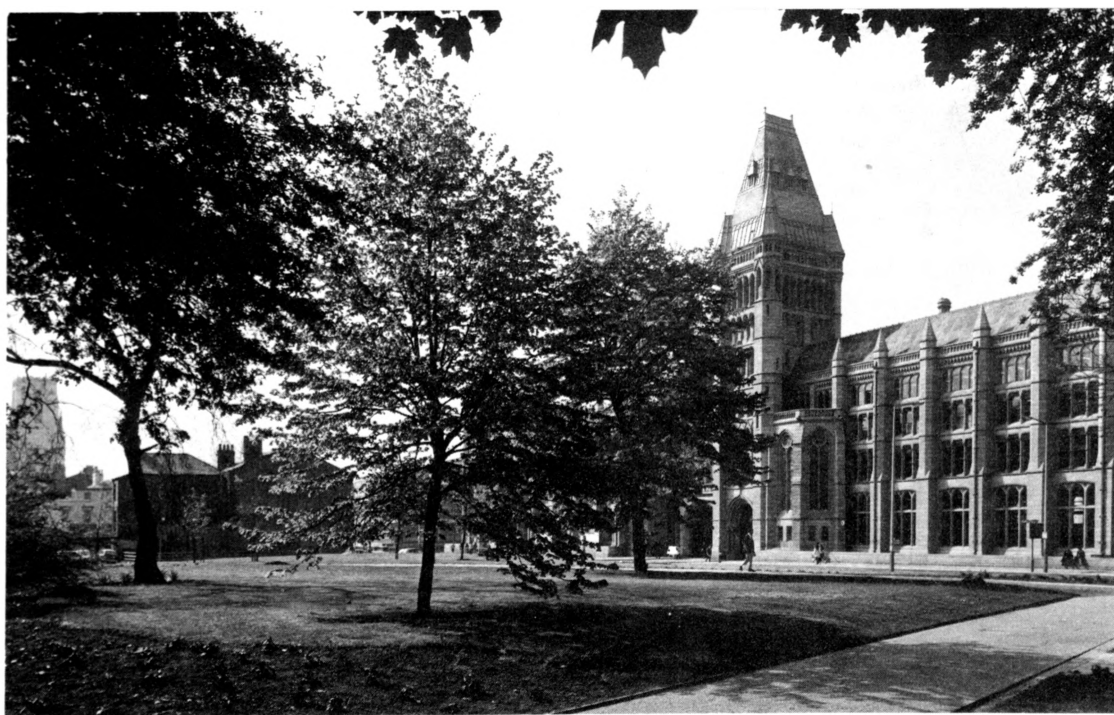
Car Parks

- 3.67. A satisfactory pattern for screening the large surface car parks which are sited alongside the peripheral vehicular routes has been set in the University part of the Precinct. The north-east park on Upper Brook Street, which incorporates trees in the division strips between the rows of cars in addition to the planted mounds around the periphery, is considered to be particularly successful. As the trees mature, so the impact of the extensive area of cars will soften still further.
- 3.68. As and when the pressure for more parking space causes the replacement of surface parking by multi-storey structures the visual concept will change dramatically. By using a mixture of the larger forest trees and smaller indigenous species which can be thickly planted close to the buildings, the 'parkway' appearance desired for the peripheral traffic routes can be achieved, the structures themselves fading into the background behind the trees. It will be clear from the Structure Plans that the multi-storey structures take up much less ground than do the surface parking areas thus allowing the surrounding planting to be substantially strengthened.

Oxford Road and the Major Open Spaces.

- 3.69. Oxford Road, as the spine public transport route serving the Precinct and leading through it to the city, should have prime environmental attraction, and yet have a landscape treatment quite different from that of the peripheral highways. The fact that it links together the three major open spaces within the Precinct — Whitworth Park in the south; the Great Quadrangle opposite Owens, which on the closure to traffic of Brunswick Street becomes the focus of the University part of the Campus, in the middle; and Grosvenor Square (All Saints), which becomes the focus of the Polytechnic, in the north — provides the opportunity to create as fine an approach road to a city centre as could be found anywhere in the country.

The recently cleaned Owens in its newly formed landscaped setting. This is one of the three major open spaces along Oxford Road.





Oxford Road at the Hospitals. The line of mature trees set in the wide footpath along the Hospital frontage well illustrates the environmental potentiality of Oxford Road.

- 3.70. The line of mature trees set in the wide footpath along the Hospital frontage, which provides walkers with a leafy route protected from vehicles, well illustrates the environmental potentiality of Oxford Road. Recent tree planting at the Maths Building; at the Precinct Centre; and along the frontage of the new College of Music adds to the landscape continuity, whilst the approved layout for the University Southern Residential Area, opposite the hospitals, provides a further significant extension of this boulevard treatment. Here, by locating the footpath on the same alignment as that inside Whitworth Park, a wide tree-planted verge is created between path and road, thus continuing northwards the tree frontage of Park and Art Gallery.
- 3.71. Apart from the three major open spaces, which afford exceptional opportunities for urban landscape design, the treatment of the smaller squares and greens which open off Oxford Road needs to be carefully related to the treatment of the lineal route itself to provide visual continuity in planting and a stimulating progressive experience for the many thousands of people who daily travel along the road on foot and by bus. Each space should recognisably have its own individuality and the texture and colour of planting should be appropriate to the particular building it fronts or frames.

Open Spaces Generally

- 3.72. The disposition of buildings within the Precinct generally is such as to provide an extensive series of interconnecting inner greens or quads protected from the main vehicular traffic routes. These quiet recreational areas should be designed to include in the most appropriate locations all the outdoor needs of a Higher Educational Precinct — sitting areas, teaching areas, activity areas of various kinds and ceremonial areas.
- 3.73. Sitting areas need to be designed not only as pleasant places in themselves, but should be so located as to provide pleasant views and vistas of buildings, grass and trees. Meandering paths should provide for leisurely walking and talking, as distinct from the busier directional footpaths referred to elsewhere. The opportunities of providing for out-door seminars, of incorporating water and sculpture and of attracting bird life by planting suitable trees and shrubs should be carefully explored.
- 3.74. Provision for active recreation need not be elaborate. None of the open spaces are either large enough or appropriate for the larger organised team games, but the incorporation of croquet lawns, bowling greens, an occasional tennis court and kick-about area, table tennis slabs and similar small-scale recreational facilities would be a simple matter to provide and carefully located would afford a significant contribution to the enjoyment of the Precinct. The over-use of the yard at the back of the McDougal Centre is a clear indication of the need for these types of facility.

- 3.75. Many departments have a need for outdoor space to cater adequately for the subjects with which they are dealing. This is particularly the case with the Departments of Town & Country Planning, of Botany and of Zoology. Landscape design in particular locations should be orientated to cater for these needs. Such a use should not in any sense be exclusive to the department concerned but should be of such a character as to provide the maximum general interest and attraction. In a wider context the display of sculpture should be considered to be of educational value. Careful location of sculptural exhibits could do much to increase the visual interest of the open spaces.
- 3.76. It seems likely that so long as society remains organised some forms of ceremony will continue. The visual delight of colour and movement on such occasions as Degree Days — of brightly coloured robes and dresses appearing against buildings, trees and lawns — should not be underestimated. For ceremonies of this nature to be really successful, however, an appropriate setting is essential. The cleaned and floodlit Owens buildings, by restoring and enhancing the distinction of the original Waterhouse design, now provide a particularly successful ceremonial setting focussed on the Main Quad.
- 3.77. In all these open spaces planting should be designed to emphasise their usefulness. Careful consideration will need to be given to the lighting of these areas so that plants will be enhanced thereby.
- 3.78. By the use of symbols the structure plans incorporate proposed locations deemed to be suited to the various recreational and educational requirements described.

Upper Level Walkways, Roof Gardens and Courtyards.

- 3.79. It is considered that the upper level walkways provide exceptional opportunities for planting of a different kind from that at ground level. The artificial creation of a suitable environment, by such means as irrigation, would enable species of an exotic nature to be incorporated.
- 3.80. In an extensive project of multi-storey buildings such as the Precinct the provision of roof gardens can be of considerable benefit to the users of surrounding buildings. A successful example of this has been carried out on the lower flat roofs of the Precinct Centre, the change from asphalt to grass and shrubs being favourably commented upon by the users. For roof gardens to be successful it is important that design should receive special consideration in terms of micro-climate, structural constraints and drainage, together with the particular function of space itself.
- 3.81. It is considered that garden courts which are enclosed within a building project should form part of the building design, being in the nature of outdoor rooms, their function and accessibility having considerable influence on the design itself.

A courtyard within the new Medical School complex, an outdoor space designed as part of the building concept.



Areas of Temporary Landscape

- 3.82. One of the important recommendations made in the Precinct Plan was that during its growth and development all open spaces not currently required for either buildings or permanent landscape should become areas of temporary landscape in order that the whole environment should at all times be a pleasant one. In this context the word 'temporary' could mean anything from 1 year to 10 years or even more. Expenditure on these areas of temporary landscape would clearly be related to their life expectancy. It is encouraging to be able to report significant progress in the provision of such temporary landscaping in certain parts of the Precinct.

4 The Buildings



Summary

This chapter touches on the problems of reconciling short term building requirements and finance with the long term development of a large educational complex which must be sufficiently flexible to allow for growth and change. It describes the function of the planning brief in the design procedure which ensures that each individual building project is integrated within the physical framework of the comprehensive plan for the Precinct. It contains a list of buildings for which planning briefs have been drawn up since the 1967 Report was published.

An account of the progress made to date in the design and construction of buildings is given and compared with the 1967 Report predictions and recommendations. For this purpose the buildings are grouped under functional headings – Academic; Residential; Commercial Centre and Sub-Centres; Public Buildings; Hospitals; Refectories & Social Facilities – which are illustrated in Appendix A, Figures A8 and A9.

Planning Briefs

- 4.1. The 1967 Report established a comprehensive physical framework of buildings, open spaces and communications for the Educational Precinct and it contained recommendations for the setting up of a procedure whereby the Planning Consultants would issue planning briefs to the architects appointed for each individual building to ensure that they designed it within that framework. The planning briefs were to comprise two parts – the first embodying the basic design criteria appertaining to all buildings in the Precinct and the second setting out more detailed criteria relating to the immediate physical context of the proposed building, such as pedestrian and vehicular access; surrounding open spaces; height, character and materials of adjoining buildings and likely future developments.
- 4.2. The continuing Government procedure of short term building programmes and finance for finite buildings having a specific function, such as Mathematics or Chemistry, does not make easy the co-ordinated development of a large Educational Institution or series of Institutions with longer term requirements for growth and change. Ideally in these circumstances the programmes should be formulated in terms of space requirements for a broad range of basic uses, such as general teaching, laboratory, or workshop space rather than identifying such uses exclusively with one currently popular, specific subject.
- 4.3. Nevertheless, in the case of the Manchester Education Precinct, a clear understanding of both short and long term needs on the part of the Institutions has allowed a sensible synthesis of requirements to be produced through the medium of the planning briefs and the comprehensive plan itself.
- 4.4. No fewer than ten firms of architects, including the City Architect's department, are currently engaged on work in the Precinct, planning briefs having been prepared for the following building developments;

University	Church & Chaplaincy Computer Building General Purpose Teaching Library Extension Students Union Extension Manchester Museum Extension Southern Area Development Music & Drama Precinct Centre 3.
U.M.I.S.T.	Student Quarter 1: Grosvenor Place Student Quarter 2: Booth Street Residence Area B – Mechanical Engineering Area B – Library and Arts
U.M.I.S.T./ University	Metallurgy
U.M.I.S.T./ University/City	Museum of Science & Industry
U.M.I.S.T./ City/University/ Hospitals	Sports Centre
City	College of Adult Education
Polytechnic	Action Area Report

- 4.5. The pedestrian network, and particularly the upper level walkway system, described in chapter 3 is fundamental to the integration of the separate buildings within a comprehensive whole, the clearest example of this being comprised of the sequence of continuous buildings in the University area extending from Maths, through Computer, Church and Chaplaincy, Precinct Centre 1 and 2 to the Business School.

Academic Buildings

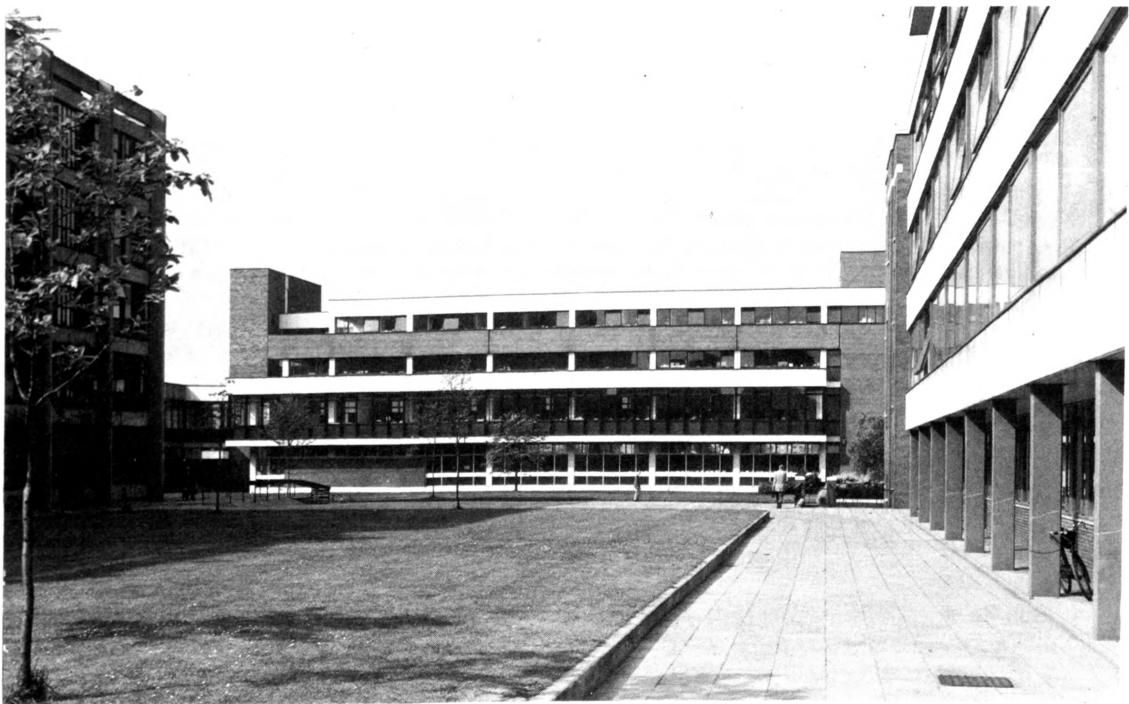
University

- 4.6. Progress with the development of academic buildings in the University closely matches the forecast in the 1967 Report. Since that date the following buildings have been erected and occupied:— Physics (Schuster); Economics and Social Science extension (Dover Street); Mathematics; a second extension to the Arts Building; Architecture and Town Planning; Business School Phase 1; Computer Building; and Medical School Phase 1 (Stopford). Subsequent phases of the Medical School are under progressive construction.



The new Medical School. One of the recently completed academic buildings of the University.

The extension to the Joint Matriculation Board buildings (facing) and the second extension to the University Arts building (right). Two recent buildings which complete the enclosure of one of the many linked open spaces in the Precinct.



- 4.7. Developments at present being planned, include a major extension of the Library; a General Purpose Teaching Building in the Arts Area and the extension of the Students Union Building. In the longer term buildings will be required for the Departments of Music and Drama; further Science extensions; the further stage of the Library extension; new accommodation for the Department of Economics and Social Studies and Phase 2 of the Business School.

U.M.I.S.T.

- 4.8. Since 1967 the following academic buildings have been erected:—Chemistry; Chemical Engineering Extension; Electrical Engineering (Ferranti Building); Mathematics and Social Sciences; and Civil Engineering Extension (Pariser Building), all of which are situated in Area A and Mechanical Engineering (George Begg Building) in Area B.
- 4.9. A new Metallurgy Building to be used by both U.M.I.S.T. and the University is at present under construction in the Student Quarter; whilst those planned for the future include Chemical Engineering, to replace the old Jackson Street Mill in Area A; and Mathematics, Library and further Engineering Departments in Area B.

Polytechnic

- 4.10. In terms of building development the major change from the 1967 Precinct Plan arises from the designation of Manchester Polytechnic on 1 January 1970. It was formed by an amalgamation of the College of Art and Design, the John Dalton College of Technology and the College of Commerce, the first two being within the Precinct and the last situated in Aytoun Street.
- 4.11. The Precinct Planning Consultants were asked to recommend sites for the development of the whole Polytechnic within the Precinct to accommodate 6,000 full time students and 6,000 part time students initially, with the possibility of further expansion to 9,000 full time and 9,000 part time students.
- 4.12. As a result of many discussions with the City Education Department, the City Planning Officer and City Architect an Action Area Report dated September 1971 was prepared in which the basic proposal was to focus the Polytechnic on Grosvenor Square (All Saints). In order to effect a satisfactory architectural and working relationship between the existing College of Art and Design, the John Dalton College of Technology and the Hall of Residence at the time being built at the north-west corner of the Square it was decided to eliminate the originally proposed linear block of multi-storey residences to the north of the Square and to replace it by a lower Polytechnic Central Administration Building. The Polytechnic development around the whole Square would be completed by allocating the site on the east side of the Square, previously proposed as a part of the U.M.I.S.T. campus, to Polytechnic purposes. These developments would thus provide an exceptional opportunity for a cohesive architectural grouping around this most important Square.
- 4.13. It was further recommended that the site between the College of Music and the College of Adult Education, south of Grosvenor Square on the west side of Oxford, should also be reserved for the Polytechnic. So far as a possible longer term expansion from 6,000 to 9,000 students was concerned it was stated that land for this would have to be sought north of Chester Street, towards the Altrincham railway line and Oxford Road station. Further reference to this possible expansion is made in Chapter 5.
- 4.14. The Action Area Report was accepted by the Joint Precinct Committee and subsequently the Polytechnic appointed Messrs. Richard Sheppard, Robson & Partners as architects for the whole project, working within the framework of the amended Precinct Plan. Based on the Action Area Report and the subsequent work of the architects the Manchester Polytechnic Development Plan was produced in June 1972.
- 4.15. Development of the Polytechnic is expected to take place progressively up to 1980. Its content and sequence, described in detail in the Development Plan Report, are broadly as follows:—
- | | |
|------------|--|
| Site No. 1 | North side of Square: A Central Building including library, administration offices, lecture theatres, tutorial rooms, recreational and dining facilities. |
| Site No. 2 | East side of Square: Faculties of Community Studies and of Management and Business, together with possible dining and communal space and 200 residential units. |
| Site No. 3 | Between College of Music and Adult Education: Faculty of Humanities and Department of Law, comprising staff and tutorial rooms, classrooms, lecture theatres and communal space. |
| Site No. 4 | West side of Square: Extension to Faculty of Art and Design comprising studios, workshops and common rooms, together with 200 residential units. |

As the new buildings are completed it is expected that the existing annexes in the City will be vacated, with the exception of the Didsbury annexe which is being developed as a centre for theatre and audio-visual work.

- 4.16. Buildings recently completed include Loxford Tower, the multi-storey Hall of Residence for 200 students situated at the north-west corner of Grosvenor Square, which contains accommodation now intended for a Students Union on the lowest three floors, and an extension to John Dalton Building eastward to Oxford Road. Stages 1, 2 and 3 of the Central Building are under construction. Demolition of the Cavendish Street Chapel on Site 4 has been carried out in anticipation of a start on the extension of the Faculty of Art and Design.



Polytechnic Faculty of Art and Design and the new College of Adult Education (extreme left) incorporating the classical facade of the old Chorlton Town Hall. An example of older buildings being cleaned and conserved in juxtaposition with new development.

College of Adult Education

- 4.17. This building has recently been completed on the south-east corner of Grosvenor Square, the site recommended in the 1967 Report. It provides for an ultimate number of 1,500 full time equivalent student places which is substantially more than originally forecast. Accommodation includes administration offices, classrooms, lecture theatres, library, a hall with stage, interesting exhibition/foyer spaces, refectories, dining and common rooms.
- 4.18. The building has been designed to incorporate the classical stone facade of the old Chorlton Town Hall and also incorporates a section of the upper level walkway system along the Oxford Road facade. This needs to be connected to ground level by means of a ramp into Grosvenor Square, which will form the

northern extremity of the system on the west side of Oxford Road, and extended southwards to connect via Site 3 of the Polytechnic to the College of Music.

Royal Northern College of Music

- 4.19. Situated between the Precinct Centre and the Polytechnic this building was completed and occupied in June 1973. It amalgamates the Northern School of Music and the Royal Manchester College of Music and its capacity by 1984 is expected to be 600 full time students, the figure forecast in the 1967 Report. The building incorporates a concert hall, theatre and recital room seating 525, 630 and 200 persons respectively, with generous concourse spaces, a refectory, lecture rooms and practice cubicles.
- 4.20. A section of the upper level walkway is incorporated along the Oxford Road frontage, under cover of the top storey of the building, the bridge link across Booth Street west having been completed in the Spring of 1974. The ground level footpath is well set back from the Oxford Road carriageway opposite the arcade in the Precinct Centre, and is bordered by an imaginative landscape garden with semi-mature trees.



Royal Northern College of Music. A section of the upper level walkway is incorporated along the Oxford Road frontage. Recent tree planting provides an extension of the Oxford Road boulevard treatment.

Elizabeth Gaskell College

- 4.21. This is a teacher training college in Hathersage Road on the south-east boundary of the Precinct. Since the 1967 Report its capacity has increased from 850 to 1,000 full time student places.

Residential Accommodation

- 4.22. In the 1967 Report, paragraphs 6.10 to 6.14, the following proposals were made for the provision of residential accommodation:—

Firstly, that as much accommodation as possible should be built within the Precinct and that it should be used by students from all Institutions on the site. This would not only invigorate the life of the Precinct but would also significantly ease the problems of transportation.

Secondly, that the residential accommodation should take two distinct forms:— multi-storey lineal blocks in certain areas where they can run east-west, for example to the south of Mancunian Way, Booth Street and the western extension of Grafton Street; and elsewhere five-storey courtyard development, with major pedestrian routes at second floor level so that the need for lifts would be minimal. This latter form would be followed in the Student Quarter site between Mancunian Way and Booth Street and on the west side of Oxford Road between Humanities Building and Whitworth Park.

On this basis it was estimated that it would be possible to provide a total residential capacity in the Precinct of some 7,000 persons.

- 4.23. Current estimates of total residential capacity in the Precinct* are somewhat lower than the estimate in the 1967 Report. Whilst the reduction in estimated total numbers, from 7,000 to 6,281 may not seem to be very great, the anticipated increase in the number of students attending the various Institutions reduces the ratio of residential places to total population from 26% to 22% (See Figure 5.1). Residential capacity is considered in detail in Chapter 5.

University

- 4.24. Residential development in the University is progressing in a form similar to that envisaged in the Plan. South of and parallel to Booth Street multi-storey lineal blocks have been built above the Precinct Centre and Business School. In the southern area, immediately to the north of Whitworth Park, work has commenced on phase 1 of a five storey housing scheme. This scheme varies from that suggested in the Plan inasmuch as the layout is comprised of linear blocks rather than being in courtyard form, and hence it has not been found possible to incorporate a comprehensive second floor walkway system to link with the walkways which cross Oxford Road and the Inner Ring Road. However, there will be limited upper level links from the access corridors of some of the blocks via the commercial sub-centre to a bridge across Oxford Road.

U.M.I.S.T.

- 4.25. Apart from existing accommodation in Chandos and Wright Robinson Halls and a second similar building to Chandos Hall for which a site is available, the remainder of U.M.I.S.T. student accommodation on the Precinct is to be situated in the Student Quarter between Mancunian Way and Booth Street East. In this area a central 'S' shaped five-storey block, Grosvenor Place, has been built and was occupied in the summer of 1972. Further residential accommodation is proposed in the form of four-storey terraces between Grosvenor Place and Booth Street East.

- 4.26. The anticipated total number of residential places in the Student Quarter is 1,560 which compares with 2,000 envisaged in the Plan.

Polytechnic

- 4.27. In the 1967 Report it was recommended that the site between Mancunian Way and Grosvenor Square (now known as Site 1) should be developed with a south facing multi-storey linear block containing approximately 640 study bedrooms. In fact, because of the difficulties of synchronising the availability of sites and finance, only the western part of this site has been used for residential purposes (Loxford Tower). It accommodates 200 study bedrooms, the remainder being comprised of academic and administrative buildings. However, space is being allocated for a further 200 study bedrooms in each of Sites 2 and 4 which lie respectively east and south of Grosvenor Square. These locations allow the residential accommodation to be arranged in linear form in double sided blocks in which the longitudinal axes are parallel to Oxford Road. Thus the total number of residential places envisaged is 600 which is close to the figure recommended in the 1967 Report. As is the case with U.M.I.S.T., however, the currently expected 1984 population has increased significantly, with the result that the ratio of residential places in the Precinct to total full time student population is reduced from 14% to 10%. Suggestions for increasing student residences beyond these figures are referred to in paragraph 5.44.

Hospitals

- 4.28. At 1973 the residential provision by the United Manchester Hospitals stood at 713 (Table F.2). As development of the hospitals proceeds, however, many of these spaces will be lost in the process of building demolition, notable exceptions being 188 in Sparshott House, 50 in St. Mary's and 40 in the Royal Eye Hospital.

- 4.29. Simultaneously with hospital demolition and development new housing will be provided in the south-east area adjacent to Hathersage Road and Brook Street. It is planned as three-storey height units and will be phased as follows:—

66 to be completed by mid-1975:
a further 489 completed by mid-1977:
a further 113 to be constructed during the 1980s.

- 4.30. This will provide a total number of 947 residential spaces but it should be noted that in the long term, when phase 2 of the hospital development is being built, the 40 spaces in the Royal Eye Hospital will be lost and the 113 spaces of the final phase could vary depending on the ultimate size of hospital expansion.

Commercial Centre and Sub-centres

- 4.31. In the 1967 Report it was recommended that a Precinct Centre should be built in the most central and

* It should be noted that within 2 miles of the Precinct to the South there will be some 4,700 student residences.

accessible position in which a variety of local 'town centre' functions would be grouped so as to generate the closest possible ties with the life of the City. It was proposed also that sub-centres and minor commercial facilities should be located in other parts of the Precinct to serve day-to-day local needs and that one of these should be located in the Grafton Street area on Oxford Road where the group of existing shops would form its nucleus. The others would be of limited size and function and would include such facilities as a single kiosk type shop, public house and small cafe or restaurant.

- 4.32. Phase 1 of the Precinct Centre was completed in 1971 and Phase 2 in September 1973, a further and last phase being proposed for the future. Phase 1 contains 9,300 m² of shopping space, 1,900 m² of showrooms and 5,400 m² of office space. Phase 2 contains 8,700 m² of space which includes a Public Branch Library, an Institute for the Deaf and further office space of which some is occupied by the University Central Services, Accommodation Office, Student Health, Careers and Appointments and the Department of Administrative Studies.
- 4.33. In Phase 1 all the office space has been let, together with the two largest of the four showrooms. In the shopping square 2 banks, a Crown post office, a public house, a bookshop, newsagent, arts supplies shop, jeweller, greengrocer, students' travel bureau, students' insurance office, a cassette centre and a travel agency are in business, whilst in Phase 2 office space is rapidly being taken up and fitting out of the branch library has commenced.
- 4.34. Whilst there has been some criticism of the rate at which shops and showrooms are being let it is important to realise that this was only to be expected during the period that Phase 1 stood in isolation, the upper level shopping square being attached only to one other building, the Business School. It was an essential principle of the Plan that the Precinct Centre should be at the cross-roads of the upper level pedestrian system with immediate links to buildings north, south, east and west. Not until the Church and Chaplaincy and the bridge over Booth Street West were completed in mid-1974 was a major consecutive part of the upper level pedestrian system made operative, i.e. from the Mathematics Building via Computer, Church and Chaplaincy, Precinct Centre to the Business School and to the College of Music. The square in front of the Church and Chaplaincy, with its large flight of steps and escalators leading to the upper level walkway system, will now become a focal point to the Precinct Centre.
- 4.35. The dominant sub-centre, now planned in detail, is located adjacent to the southern residential area on the west side of Oxford Road between Whitworth Park and the proposed Inner Ring Road. This sub-centre will consist of shops and commercial activities located on the ground floor of a five storey terrace structure where the upper storeys will be students' flats. The commercial accommodation includes space for banks, a public house, Medical Consultants' offices and ten shops, with scope for some future expansion.
- 4.36. In addition to small shops located within the Student Union buildings, a small sub-centre has been completed at U.M.I.S.T. and one is proposed as part of the Polytechnic complex. The U.M.I.S.T. sub-centre in Sackville Street provides a public house, a bank, a restaurant and a newsagent/tobacconist kiosk. The sub-centre at the Polytechnic is likely to be located near to the Central Building and to be of similar character and size.

Public Buildings

Buildings referred to under this heading are those which have a significant degree of attraction to and use by the members of the general public.

Manchester Museum

- 4.37. The University is initiating an extension to the Manchester Museum which is located immediately to the north of the Owens building. The extension will take place to the west of the existing Museum, as suggested in the 1967 Report. It will incorporate a ramp from ground level to the upper walkway system, complementary to the ramp in the Maths building on the opposite side of Oxford Road, which will later be extended into the proposed Economics and Social Studies building to the north and from there into the Precinct Centre.

Museum of Science and Industry

- 4.38. U.M.I.S.T., the University and the City are jointly sponsoring a new building for the Museum of Science and Industry to replace the existing inadequate building in Grosvenor Street. It is to be located on the north-east corner of the crossing of Oxford Road and Booth Street where it will be well served by public transport and strengthen the existing nucleus of buildings of a quasi-public and commercial character — principally Precinct Centre 1 and 2 and the College of Music — in that area.
- 4.39. The building will incorporate a key section of the upper level walkway system with links southward to Precinct Centre 2 and northward to the proposed Sports Centre.

Church & Chaplaincy

- 4.40. The Church and Chaplaincy, an ecumenical project, completed in the summer of 1974, links Precinct Centre 2 with Computer. Whilst using the same materials as the adjoining buildings its sculptural form expresses its special use and provides an interesting contrast with them. It is sited at a key point in the ground level and upper level pedestrian systems and its extensive forecourt, open to Oxford Road, forms an attractive paved square giving clearly visible access between the two pedestrian levels by means of a major flight of steps and escalators. Its completion has provided the missing link in that part of the upper level walkway system which extends from Maths, through Computer, Precinct Centre 1 and 2 to the Business School.

Sports Centre

- 4.41. Whilst the 1967 Precinct Report was in course of preparation the Joint Precinct Committee set up a Working Party to examine the provision of sports facilities in the Precinct. In addition to the representatives of the University, U.M.I.S.T. and the Hospitals, the City was represented by members of the Education, Planning, Parks and Baths and Laundries Departments. The City Planning Officer acted as convenor, the terms of reference being "to consider and report on the requirements of the constituent members with regard to the provision of physical education and sports facilities within the Precinct; in addition to consider to what extent any facilities can be shared by the constituent members, and also by the general public". The Working Party published its report in October 1966.
- 4.42. The Working Party endorsed the proposals in the then draft 1967 Precinct Report, that the Sports Centre should be located on the east side of Oxford Road between Booth Street East and Grosvenor Street and described the various facilities and the amount of space required for the activities which they considered should be provided. They also supported the proposal to include three storeys of student residential accommodation in courtyard form above the podium of the sports halls.
- 4.43. Based on the report of the Working Party the Precinct Planners were asked by the Joint Precinct Committee to prepare, in collaboration with the members of the Working Party, a more definitive brief and sketch design for the project. This was carried out and the Consultant's report "Sports Facilities: outline design proposals" was produced in July 1969. The report indicated that in balancing the desirable accommodation with the likely cost limits the site could be somewhat reduced in length, the southern boundary therefore being adjusted to Rosamond Street East instead of Booth Street East. This had the advantage of leaving a workable rectangular site between these two roads which has since been allocated for the Museum of Science and Industry.
- 4.44. In 1971 the Joint Precinct Committee invited U.M.I.S.T. to form a committee on which all the Institutions and the City are represented. This committee met for the first time on 18 November 1971 when the Precinct Planners presented a revised edition of the July 1969 Report showing how the building could be phased.
- 4.45. Subsequent feasibility studies have concluded that on account of the current high building costs it will not be possible to incorporate student residences in the superstructure. The Centre is therefore now envisaged as a separate multi-level sports complex integrated into the Precinct in a manner similar to the College of Music. It is presently intended that the Centre will serve a wider catchment area than previously envisaged, providing facilities for training and competition at either regional or county levels for a wide range of sports in addition to the basic Precinct requirements. This will represent a significant contribution to the integration of "Town and Gown" as suggested in the 1967 Report.
- 4.46. The Centre will be carefully related to the various circulation systems within the Precinct with particular reference to public access for special events for which up to 2,000 spectators can be accommodated. The Centre will incorporate a section of the Oxford Road upper level walkway system with bridge links to the College of Adult Education, Museum of Science and Industry, Polytechnic Site 2 building, and a ramp approach from Rosamond Street East. This should form a highly flexible linkage with the ultimate development of multi-storey car parks and bus routes within the Precinct. Entrances to the building for both spectators and participants will be primarily from the upper level walkway system on Oxford Road; a secondary entrance being provided at ground level on Oxford Road for controlled use in relation to special events or for access for disabled persons. Service access to the building will be from a service road on the line of York Street which will also serve Grosvenor Place.
- 4.47. The accommodation includes a 50 metre swimming pool divisible into two separate pools for deep water activities and training with a separate pool for multi-purpose use; a small ice rink for recreational and teaching purposes; two sports halls, squash courts, projectile and combat rooms, together with foyer and catering facilities which over-look the pools.
- 4.48. Following the setting up of the Manchester Education Precinct Sports Centre Joint Committee and a meeting of that Committee and site inspection by Dr. Roger Bannister, Chairman of the Sports Council, final scheme designs and cost estimates are now in course of preparation.

Hospitals

- 4.49. Since publication of the 1967 Report the main physical developments have been the completion of the St. Mary's Maternity Hospital on Hathersage Road, in fair face concrete construction, and the red brick General Purpose Research Building on Oxford Road. During this period, however, much effort has been devoted to acquiring housing areas to the east of existing hospital buildings, a process which is vital to the phasing of the redevelopment of the main hospital complex.
- 4.50. In 1973 a start was made on the new Works Department and during 1974 construction should commence on the new Laundry and Boiler House, ancillary buildings upon which the later main development will depend.
- 4.51. It is anticipated that Phase 1 of the main hospital development will commence in 1976 occupying a location to the north-east of the site, in the housing clearance area. Phasing in this way will allow the existing hospitals to continue operating until Phase 1 is complete. It will then be possible to instigate a rolling programme of demolition of the older buildings of the Royal Infirmary, Royal Eye Hospital and St. Mary's Gynaecological Hospital so that further phases of new buildings may progress. Of the existing buildings, when the ultimate plan is developed, only the Maternity Unit, General Purpose Building and Existing Nurses Home (Sparshott House) will remain.
- 4.52. The hospitals' residential development is considered earlier in this chapter whilst future expansion is dealt with in Chapter 5.

Refectories and Social Facilities

University

- 4.53. The existing Student Union, completed in 1957, was designed when the student population was 4,200. Now that the student population has reached well over twice that size the building is extremely overcrowded even though other student amenities have been provided elsewhere on the campus. Design has commenced on a substantial extension which will link with the south end of the existing building and will serve an increased student population. No further major extension is anticipated, the intention being to provide de-centralised facilities within other buildings as the University continues to expand.
- 4.54. The Refectory was completed in 1965. The kitchen had capacity for preparing 7,000 meals during the lunchtime period, and the dining rooms were equipped to serve 6,000 meals on the basis of 2½ sittings during that period. In the 1967 Report it was predicted that the Refectory would reach capacity during 1972. It was proposed that, in the longer term, the building should be extended eastwards at second and third storey levels over Oxford Road and that the lower level should be used for extended refectory dining space and the upper level as a banqueting room. Since the 1967 Report was published there has been a radical change in the eating habits of the University staff and students, mainly towards snack meals, causing the earlier predictions to be incorrect. Because most products are now bought in "prepared" form the bakery and butchery areas have passed into disuse, the surplus space being added to eating space. The kitchen has therefore become 25% smaller than it was originally. Despite this 25% reduction in the kitchen area, it is operating only to 50% of its capacity.
- 4.55. The dining halls are at present operating at near capacity during the peak period although there is plenty of capacity remaining in the earlier and later parts of the lunch period. This suggests that some further staggering of lunch periods between lectures would result in making fuller use of the existing refectory space.
- 4.56. It is anticipated that extension of this building will eventually be required as described in the 1967 Report to the east of the existing building. The extension is likely to be used for staff amenities and reception purposes, the existing building catering adequately for student needs.
- 4.57. The Business School, opened in 1972, contains a refectory which provides adequately for the staff, full time students and those attending the many short courses which are usually in progress. It is intended that the School will be extended westwards at some time in the near future and that the extension may include some further refreshment facilities.

U.M.I.S.T.

- 4.58. The Students' Union (Barnes Wallis Building), the Technology Senior (Staff House) and the Estates Department provide both social and catering accommodation in the Main Building for all members of the Institution. Whilst a proportion of the catering facilities are fully used during the peak lunchtime period, others have spare capacity. As at the University there is a trend amongst the students to subscribe more to snack services which are available at liquor bars, snack bars and the cafeterias and if this trend continues there will need to be alterations to the existing facilities in order to meet this demand. Apart from this kind of re-organisation it is not anticipated that any further catering facilities will be required.

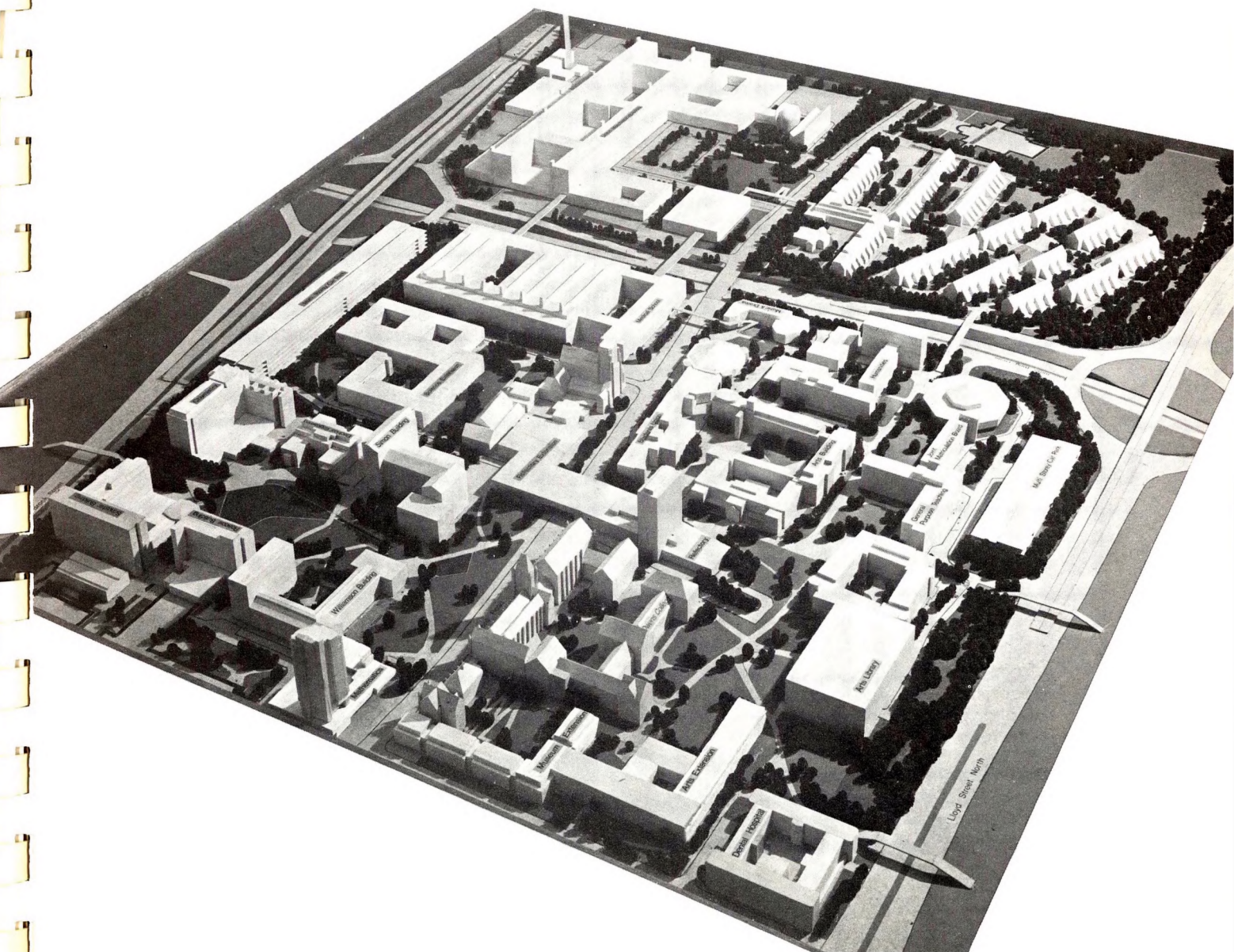
for the population growth before 1977. Student Union areas will need to be increased with student growth, but needs can only be determined as trends become apparent nearer the time.

Polytechnic

- 4.59. The provision which the Polytechnic is making for its social and dining facilities is set out clearly in Chapter 3 of the Polytechnic's own report on the Development Plan. Information from that report is used freely in the following paragraphs.
- 4.60. The Polytechnic has inherited a number of common rooms and catering units, many of which will be retained although their usage may be changed. The changing habit towards snack services will tend to reduce the need for conventional meals and the snacks to be provided in dispersed facilities within new buildings will meet the more immediate and local requirements.
- 4.61. There will be some re-arrangement of refectory facilities in the original College of Art and Design as the College of Adult Education, immediately joining this building, includes provision for refectory accommodation to be shared by the Polytechnic. The dining facilities in the John Dalton building have been improved since the completion of the new extension. The Hall of Residence (Loxford Tower), now complete, includes a dining hall which, whilst catering in the evening for its residents, will be available for general use at lunchtime. The new Central Building, now under construction, will include a Staff House and eventually a Students' Union comprising further dining rooms, bars, lounges and common rooms.
- 4.62. The current lunchtime turnover totals 700 meals and 850 snacks and it is estimated that the facilities are being used at about 80% capacity.

Royal Northern College of Music

- 4.63. The dining room provided by the College was designed to provide for an ultimate population of 700. At present it is providing some 400 meals during the lunchtime period, whilst at other times of the day snacks are served in the students lounge but it should be noted that here, unlike the other Institutions, the mid-day meal is the more popular. This may be attributed to the rather different activities of music students who tend to use the premises during the evenings for practice, thus making it more essential that they have a substantial meal at mid-day. It is anticipated that no expansion of these facilities will be required although some re-planning may be necessary from time to time to meet changing habits.

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Summary

This chapter is primarily statistical, relating building content in terms of space in academic, commercial and communal buildings, together with numbers of persons in residential buildings, to the available site area in the various parts of the Precinct.

In addition to indicating the amount of working and living accommodation which can be provided on those parts of the Precinct not yet either developed or planned in detail, the statistics also demonstrate the extent of a short-fall of residential accommodation within the Precinct if U.G.C. cost restrictions continue to preclude the building forms recommended in the 1967 Report.

The statistics also indicate a need for expansion outside the present Precinct boundaries for academic purposes if long term development proposals by U.M.I.S.T. and the Polytechnic are to materialise. Suggestions are made as to where such expansion should take place.

In the 1967 Report (para. 3.10) an important statement was made in relation to site capacity, to the effect that a development density figure of 2.0 was used in the plan as the norm in relating total floor area to total site area over each substantial area of development or re-development. In this chapter, therefore, the floor areas of the existing and currently planned buildings are related to the overall site areas of carefully selected segments of the University and U.M.I.S.T. territory in order to establish the extent of further building which can be satisfactorily incorporated. It needs to be emphasised that the development density quoted is used as a general guide only, the precise ratio of building to site in each area being finally based on a more subjective assessment of building volume to open space, taking full account of the characteristics of that area—height and extent of existing buildings, aspect and prospect, proximity of major highways, servicing arrangements and recreational needs.

Because of the existence of separate development plans for the Polytechnic and Hospitals these institutions are dealt with in more general terms.

Further details of the development density basis for site capacity calculations are contained in Appendix B of the 1967 Report. Details of the current calculations are given in Appendix G of the present report headed "Land and Gross Floor Areas of Buildings," and the development area boundaries are shown in Figure A. 13.

University

- 5.1. It is the intention of the University to provide for some 15,000 student spaces ultimately and at the planned rate of expansion this should be achieved some time after 1984. This is the same figure postulated in the 1967 Report.
- 5.2. However, since the publication of the 1967 Report changes have taken place in student space requirements. Present U.G.C. standards lay down a reduced student/space ratio concurrent with a reduced staff/student ratio. The overall effect of this is to reduce the total building requirement below that originally considered necessary in the ultimate to accommodate the same number of students. Nevertheless the maximum building development areas shown will be substantially required with the exception of the North East Area where perhaps only half the 30,000 m² will be needed for academic use.
- 5.3. New developments in the four main areas are likely to be designated for the following uses:—

North-West	—	Economics and Social Studies Arts Extension and Administration
South-West	—	Music and Drama
North-East	—	Science Extensions
South-East	—	Science Extensions Staff Amenities and Conference Rooms

It should be noted that when this development is complete the different areas of the University will be grouped into clearly defined uses — Sciences to the east; Medicine to the south east and adjacent to the Hospitals; Arts to the west; commercial and quasi-public buildings to the north; with Administration in the centre.

North-West and Owens Area (Table G1)

- 5.4. When all the planned developments in this area are complete and the outdated structures demolished there will remain two infill areas suitable for redevelopment, viz., the area between Bridgeford Street and Precinct Centre 1 and the area between Bridgeford Street and Burlington Street west of Owens.

- 5.5. When the normal maximum development density of 2.0 is applied to these spaces a spare gross floor area of 24,000m² and 22,000m² respectively is indicated. However it is considered that this bulk of building is neither desirable nor required in this area.
- 5.6. Considering the desirable maximum floor areas on the basis of a balance between building form and open space at building heights related to existing structures the figures would be 20,000m² and 12,000m² respectively.
- 5.7. When the North-West and Owens Area becomes fully developed to these maxima the total gross floor area of buildings will be 169,280m² at an average development density of 1.85.

South-West Area (Table G2)

- 5.8. When the presently planned buildings are complete there will be very little capacity for future expansion even though the density is fairly low. The only space remaining will be that bounded by the Union extension, the University Theatre and the line of the proposed Inner Ring Road. At a local development density of 2.0 there would be capacity for 7,000m² floor space. However, as stated in Chapter 3, it is proposed that part of this space should form a landscaped forecourt to the Theatre and the other buildings surrounding it. It is therefore considered to be desirable that 3,500m² should be the maximum floor area for future expansion. The total floor area would then be 96,100m² at an average development density of 1.2.

North-East Area (Table G3)

- 5.9. The space immediately north of the Roscoe and Williamson Buildings was referred to in the 1967 Report as reserved for Science building expansion at a density of 2.0. Calculated at this density there would be spare capacity for 34,000m². However, on the basis of achieving a reasonable balance between building form and open space the maximum developable floor area should be 30,000m². This would provide a total floor area of 149,460m² at an average development density of 1.8.

South-East Area (Table G4)

- 5.10. In this area two sites will become available for development. The larger one will be to the south of Dover Street, at present occupied by the older buildings of the Economics and Social Sciences Department and other smaller old buildings. The block erected in 1966 within this department will be converted into residences. The smaller site is that facing the Refectory across Oxford Road and immediately north of the Holy Name Chaplaincy.
- 5.11. At a development density of 2.0 it would be possible to provide 25,000m² of building floor space on these two sites.
- 5.12. Looking at this in terms of building mass related to open space it would seem reasonable to develop these two sites up to a maximum of 16,000m² and 8,000m² respectively. This would provide a total floor area of 172,780m² at a development density of 1.9.

U.M.I.S.T.

- 5.13. It is the intention of U.M.I.S.T. to expand to accommodate 6,000 students and it is expected that this will have taken place by 1984.
- 5.14. It is considered that the academic needs of this number of students can be met within the development areas A and B, the Main Building and the site for Metallurgy extension. This allows for modifications to the Main Building which would effectively reduce the usable floor area and the replacement of Chemical Engineering with a smaller but more economical building.
- 5.15. However, should student numbers increase beyond this figure expansion of the site may be required. The triangular site to the east of Main Building would be ideally situated for such expansion and would provide U.M.I.S.T. with a sensible and clearly defined boundary which would link the Main Building more strongly with the other parts of the campus.
- 5.16. It will be necessary for U.M.I.S.T. to make an early decision whether to expand in this way in order that the area can be designated for educational use.

Area A (Table G5)

- 5.17. This area is fully developed with the exception of the Chemical Engineering Building, originally Jackson Street Mill, converted during 1958-59 into academic space. In view of the existing nearby tall buildings on the periphery of the site it is desirable that the replacement for this building should be of less bulk than the existing structure, perhaps of a maximum of 5 storeys in height and with an area not exceeding 13,000m². The total floor space in Area A would then become 84,240m² at a development density of 1.2.

Area B (Table G6)

- 5.18. In the 1967 Report it was suggested that the development density of this area could be exceptionally high — 2.5 — which would balance to some extent the low density of the other areas of U.M.I.S.T. This would be made possible by locating continuous workshop structures on the ground and first floors, with two or three storey laboratory and research rooms around courtyards over parts of these structures with blocks of laboratory and teaching accommodation rising above them. Now that the site has been partly developed and more detailed designs prepared for the remainder of the area, it can be confirmed that this proposal still holds good.
- 5.19. At this high development density the total floor area when developed would be 84,000m². When all existing and planned projects are taken into account 29,850m² remain for future expansion.

Area C (Table G7)

- 5.20. This area includes not only the open space to the north of the railway viaduct but the Main Building and the triangular shaped site to the east of the Main Building. The latter site is not at present within the boundaries of U.M.I.S.T. ownership and the reason for including it here is given in paragraph 5.15.
- 5.21. At a development density of 2.0 the maximum floor area would be 65,400m² and on this basis there would be capacity for a further 14,600m². Because of the particular location of this site in an area of tall city centre scale buildings there should be no objection to achieving this density if so required.

Student Quarter (Table G8)

- 5.22. This is an area of mixed development to be composed of academic, public and residential buildings for both U.M.I.S.T. and the Polytechnic; some of the buildings under the auspices of U.M.I.S.T., such as Metallurgy and the Sports Centre, being shared by other Institutions and the City. Because of the high proportion of residential use it is not valid to use the development density basis to calculate the possible future floor area.
- 5.23. The buildings on the Oxford Road frontage are being designed on the basis of the planning briefs which relate them in bulk and height to the scale of existing building in Oxford Road. The site now occupied by the Science Museum will eventually be redeveloped as an academic extension to the Metallurgy Building. The remaining space is being considered for further residential use and is dealt with under the heading of "Residential Development".

Polytechnic Area (Table G9)

- 5.24. The Polytechnic Governing Body is at present planning for a growth to 6,000 part-time students by the early 1980's and, apart from certain residential accommodation, this can be accommodated within the existing boundaries.
- 5.25. When the existing area is developed the total floor area (including other non-Polytechnic buildings and excluding Site 2 which has been considered with U.M.I.S.T. Student Quarter) will be 155,300m² at an average development density of 1.3.
- 5.26. Over and above the planned expansion to 6,000 full-time and 6,000 part-time students, the Polytechnic Governing Body has agreed that a figure of 9,000 full-time and 9,000 part-time students be set as the possible ultimate total. In the event of a decision to expand to this ultimate total, building development would need to take place north of Chester Street.
- 5.27. It is stated in the Polytechnic Development Report of June 1972 that such an expansion would require in the order of 43,500m² gross floor area which, at a development density of 2.0 would require an additional site of at least 21,750m².
- 5.28. The site bounded by Chester Street, Oxford Road, Cambridge Street and the railway viaduct has a total area of 52,000m², about twice the area required for Polytechnic expansion. It is not at present designated for educational use nor owned by the City.
- 5.29. Because of the possible ultimate expansion to 9,000 students and also because of the need to provide the additional residential accommodation which will be required even for the 6,000 student stage, the Polytechnic Governors have recently recommended that the necessary action be taken to reserve land north of Chester Street for Polytechnic purposes. This matter however has yet to be resolved by the City Council.

Other Colleges

Royal Northern College of Music

- 5.30. Opened early in 1973 this new college situated at the south end of the Polytechnic Development Area

is an amalgamation of the two previously existing colleges in the Precinct. It has a student population of 500 full time students which is expected to expand to 600 ultimately.

- 5.31. Already, there appears to be a shortage of space in the building, the previous two buildings still remaining in use. It is estimated by the College that it will need to find at least 500 m² of space either by expansion into Polytechnic Site 3 or within the present site.
- 5.32. The possibility of the College sharing space with the Polytechnic within Site 3 has been suggested and, with this possibility in mind, the type of accommodation planned for this building is of a general teaching nature to allow for the greatest flexibility. However the kind of space the College is looking for is of a particular character, being for theatre workshops and wardrobes, lecture and conference rooms. For the College to expand within its present boundaries may therefore be the more satisfactory solution. The College is at present exploring ways in which this additional accommodation can be found within the present structure.

College of Adult Education

- 5.33. A City College within the Polytechnic Development Area, this newly completed building is designed for an ultimate population of 1,500 part time students (the full time equivalent figure).
No further physical expansion of this institution is expected.

Hospitals

- 5.34. The planned redevelopment of the Hospitals, occupying some 184,000m² of land, is in its early stages. Recent buildings are St. Mary's Maternity Hospital on Hathersage Road and the General Purpose block on the Oxford Road frontage. Phase 1 of the new Hospital is planned to take the form of multi-storey slab blocks rising 7 storeys above a 2 storey podium. It is programmed for completion in the early 1980's by which time some 550 new residential units should be in use.
- 5.35. The eventual form which Phases 2 and 3 of the development will take is not yet finally decided but it is understood that these phases are likely to be required during the 1980's or early 1990's. The size of the final phase of the residential accommodation could vary in accordance with the Hospital's requirements at that time. When Phases 1,2,3 and the ancillary hospital buildings are constructed the development density for that sector of the site will be 1.5.
- 5.36. A long term expansion area is to be preserved between Phase 2 and the existing Nurses Home. This area is initially to be landscaped but it is possible that eventually a new dental hospital may be built on part of it to replace the present Bridgeford Street building.
- 5.37. The land immediately south of Hathersage Road is at present designated for further expansion of the Hospitals, part of the land being under their ownership. Whilst at the present time it seems unlikely that the Hospital will require the whole of this land for development the Board of Governors deem it prudent to retain it for possible long term development, the nature of which is as yet unknown. It should be noted that Figure A.13 shows the hospital expansion area limited to the part of the land south of Hathersage Road which is at present under hospital ownership whereas the area designated by the City for hospital use extends over a larger area bounded to the south by Oxford Place, to the east by Anson Road and to the west by Wilmslow Road.

Residential Development (Tables F1 to F4)

- 5.38. The 1967 Report recommended a target of 7,000 residential places within the Precinct and outlined ways in which this could be achieved. It now seems that this target figure is not likely to be met, primarily due to the fact that the Government's current cost limits preclude the building of residences in the form shown in the Plan — namely in multi-storey blocks and in courtyard form over academic buildings. The short-fall is made more serious by the fact that the planned ultimate student population has increased and thus the proportion of students housed on the Precinct will be significantly reduced involving the population in a greater number of trips from outside the Precinct*. Figure 5.1 shows a comparison of residential places within the Precinct proposed in the 1967 Report and those currently planned.

This argument is not extended to embrace general matters of residential need for students as this would involve a study of all residences both within and outside the Precinct which would be beyond the scope of this Report.

Figure 5.1.

	1967 Report			No's currently planned		
	Student population	Precinct residences	%	Student population	Precinct residences	%
University	15,000	not stated	—	14,365	2,888	21
U.M.I.S.T.	5,000	2,486	49	6,000	1,846	31
Polytechnic	4,000	640	16	6,000	600	10
Hospital	1,400	not stated	—	760	947	—
Colleges	1,450	—	—	1,600	—	—
Totals	26,850	7,000	26	28,725	6,281	22

5.39. The problem of finding living accommodation for students is made more acute because of a reduction in the number of "digs" within a reasonable radius of the Precinct since the older housing areas have been redeveloped. There is no reason to believe that this situation will improve. However, when the "Picc-Vic" cross-city rail link has been constructed, the northern sector of the City will provide a greatly increased hinterland for potential "digs" within convenient travel time of the Precinct.

5.40. Within the University areas schemes have been designed for all the sites which were allocated for residential development in the Plan and it seems probable that the total of some 2,888 places within those areas will be achieved. Any further development would need to be outside the area.

5.41. In the case of U.M.I.S.T. the position is less satisfactory. The 1967 Report outlined how a hall similar to the 12 storey Chandos Hall could be added to Area C and multi-storey housing erected in the Student Quarter, together accommodating 2,160 students. It now seems unlikely that current cost limits will enable either of these proposals to be implemented. As an example of the problem which is thereby being created attention is drawn to the density achieved so far in that part of the Student Quarter which is currently being developed.

Grosvenor Place	470	
Planned residences adjacent to Booth Street	240	
Total	710	residences
Site Area	19,000m ² = 1.9 ha	
Density (residences/hectare)	373 r/ha	

5.42. Should the part to the north of Student Quarter be developed at the same density only a further 450 residential places would be achieved compared with 650 planned. At this density the following total short-fall of student accommodation would occur :—

Additional accommodation recommended in the 1967 Report	2160 places
Probable number which would be achieved by omitting a second "Chandos Hall" and developing the site north of Grosvenor Street at the density prevailing south of Grosvenor Street	1160 places
Total short-fall of residences at U.M.I.S.T.	1000 places

5.43. The figures illustrate how critical is the need to develop the northern part of Student Quarter to its fullest potential. It is also important that the building forms adopted should harmonise with those of Site 2 of the Polytechnic and include "barrier" type blocks for protection of the accommodation against noise from the major roads which form the boundaries on the north and east sides of the site.

5.44. The Polytechnic Development Plan postulates a total requirement of 1,000 student residences, 600 of which are planned within the main Polytechnic site and 400 which will be sited elsewhere. A review of the position concerning student residences has indicated the desirability of increasing this total and, the Governing Body has recently recommended that the long term aim should be to provide 2,500 student residences, i.e. increase of 1,500 over the number already planned.

5.45. There are no further sites available within the Polytechnic boundaries but the possibility of increasing

the height of the residential block planned for Site 2 (Student Quarter) by at least 2 storeys should be considered as this would increase the number of residences by some 150 places.

- 5.46. In view of the problem of finding places for students to live which will become more acute as the Institutions expand their numbers, it is vital that those sites designated for residential use within the Precinct should be developed to their full capacity. The City and the Institutions need to work together to find a solution to the constraints imposed by current Government cost limits which seem to preclude residences over four storeys in height. To build only low density, low rise residential units would be a waste of valuable land immediately adjoining the city centre and would reduce the amount of accommodation that can be provided within the Precinct itself. This would mean having to acquire expensive sites in the suburbs for student residences, which would result in further strain on transport facilities.

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Figure A1 Precinct Plan 1973

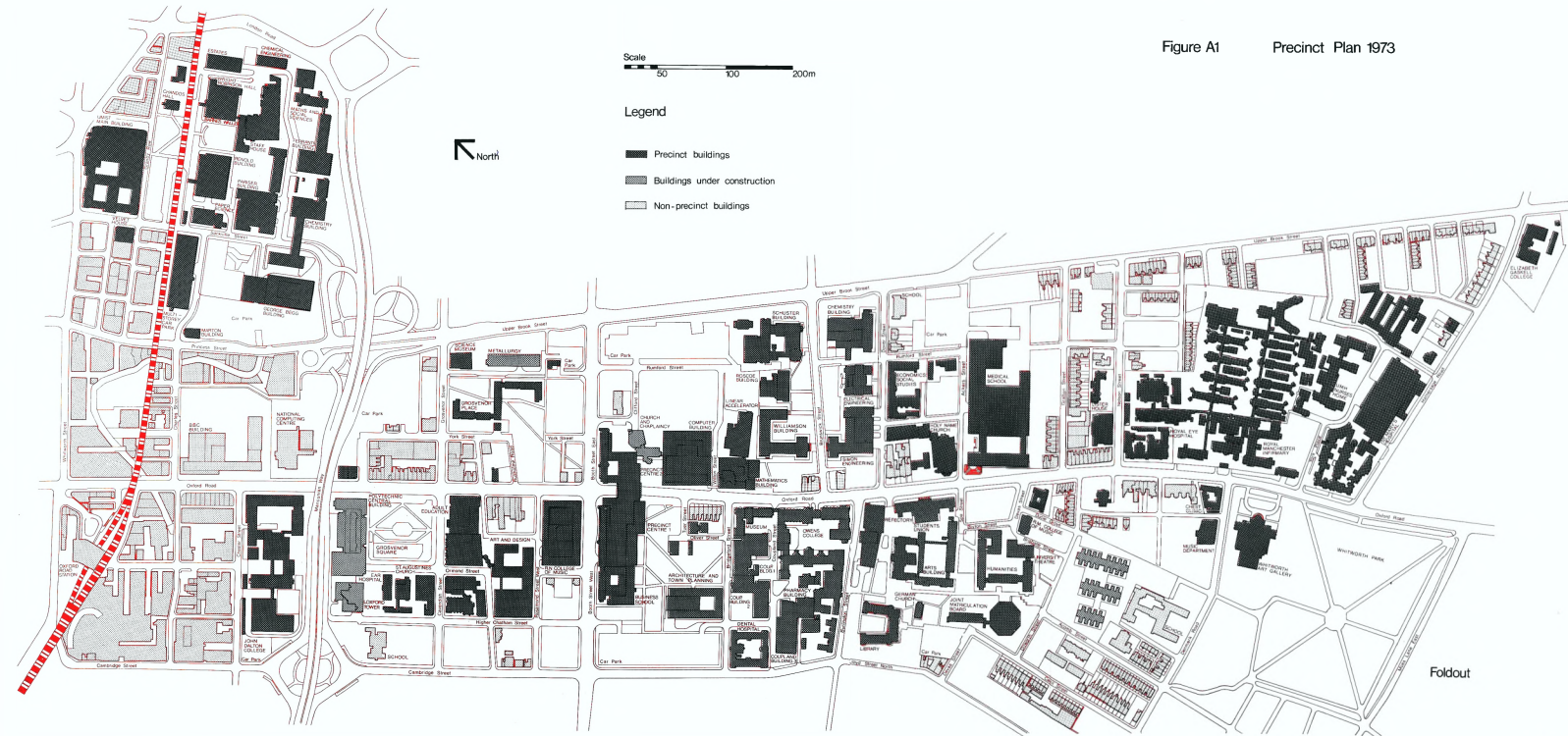


Figure A2 Precinct Plan 1978

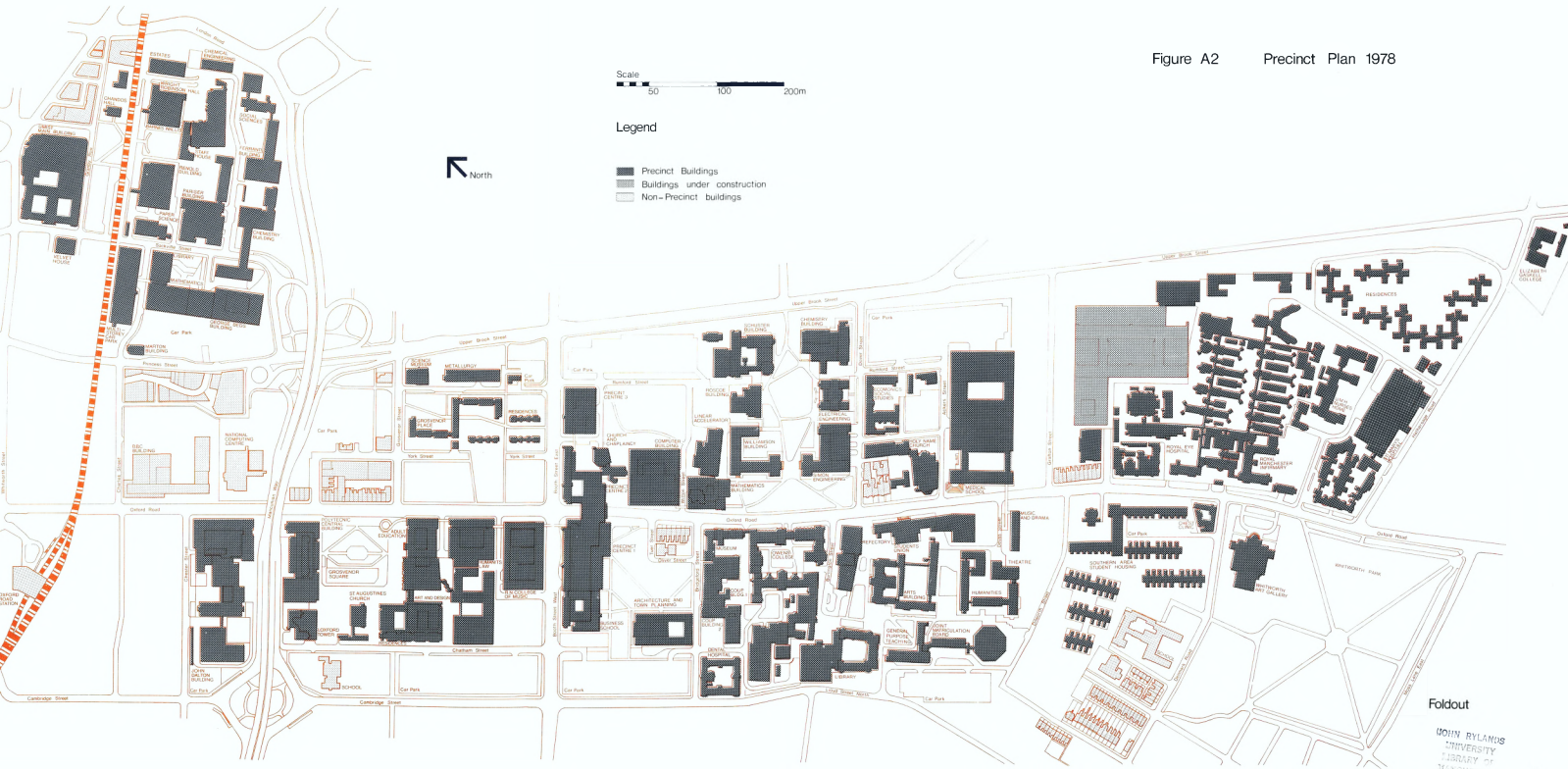
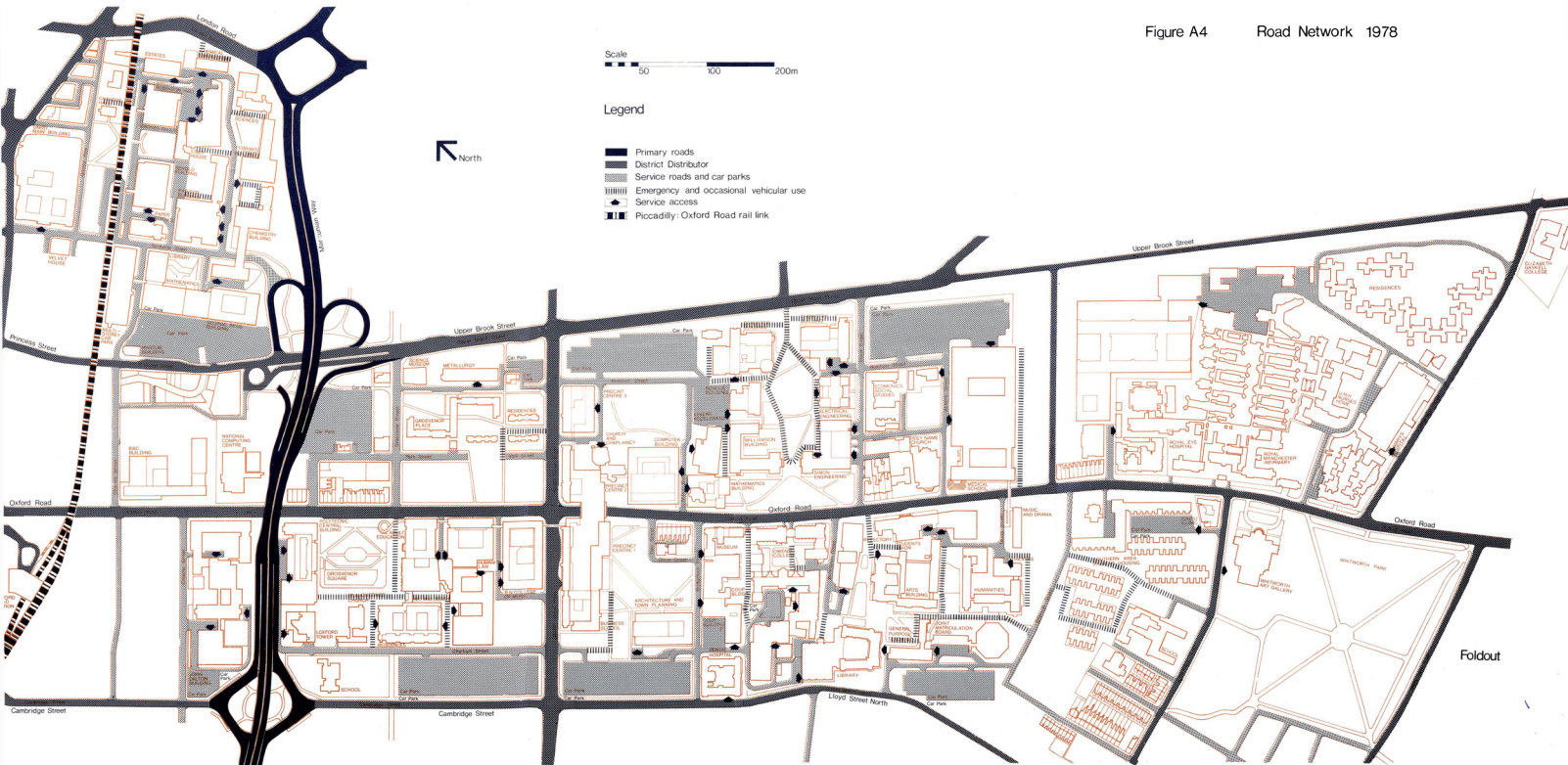


Figure A3 Precinct Plan
Ultimate Proposed Development



Figure A4

Road Network 1978



Road Network Ultimate Proposals



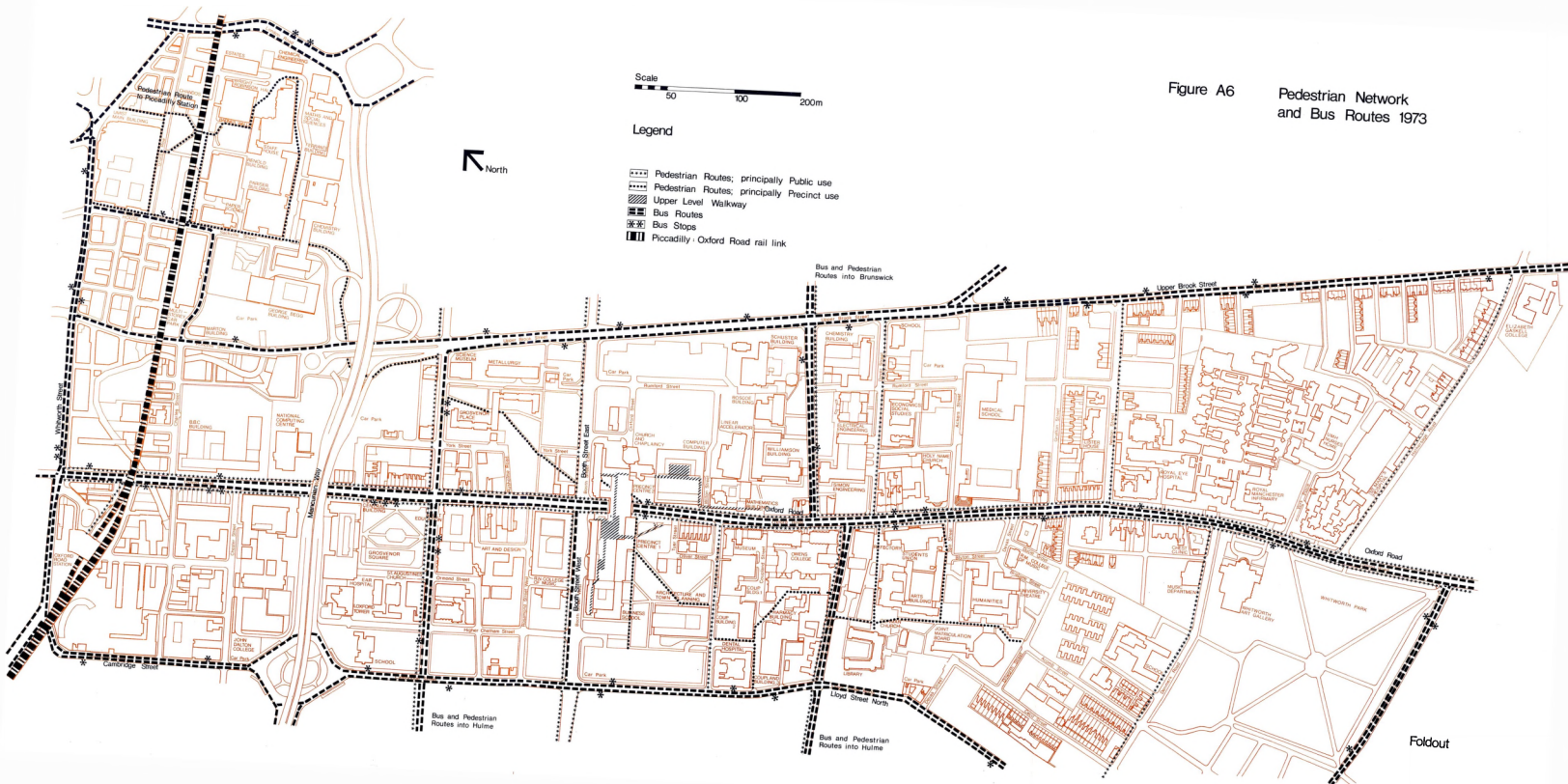


Figure A7 Pedestrian Network: Cycle Tracks and Bus Routes: Ultimate Proposals

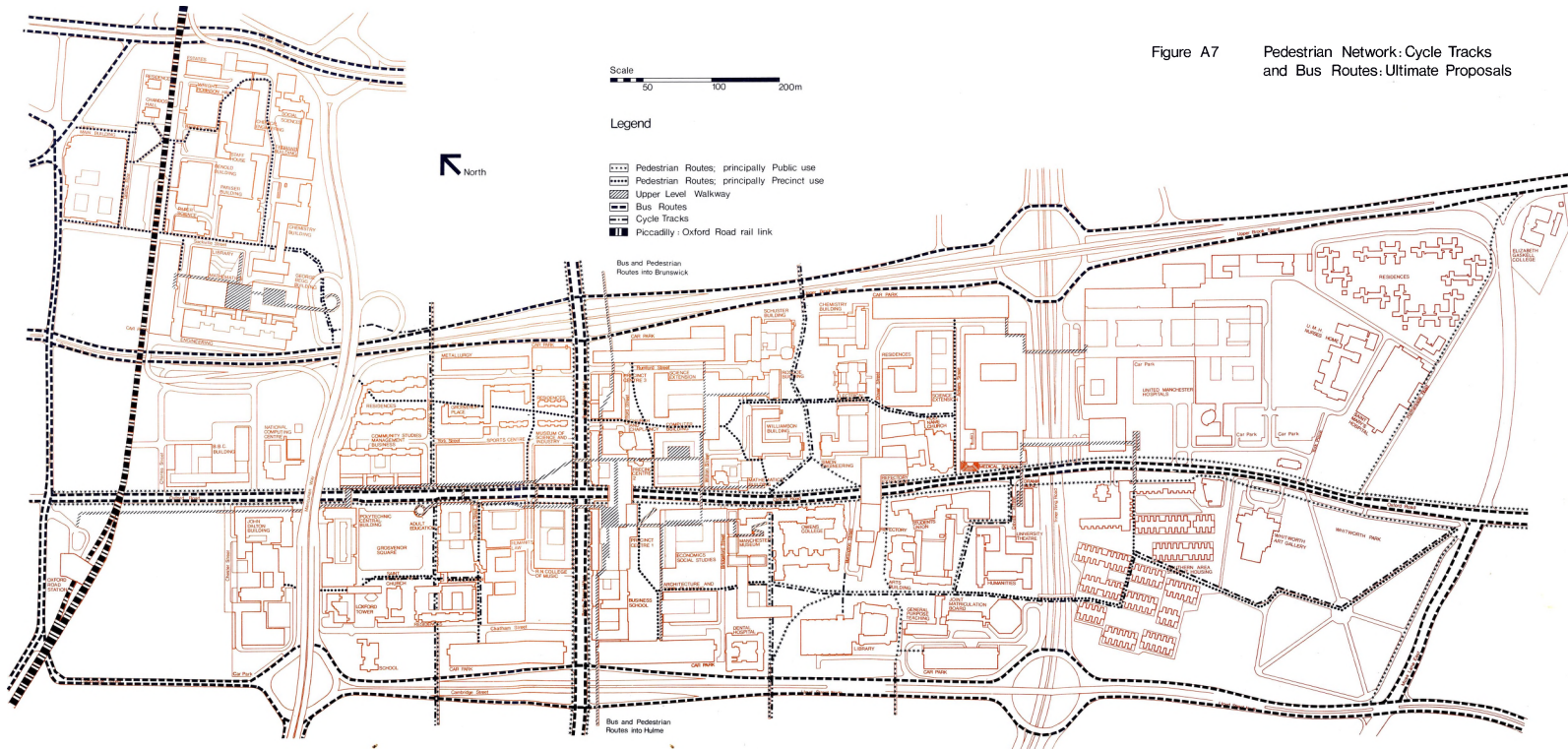


Figure A8 Building Uses 1973

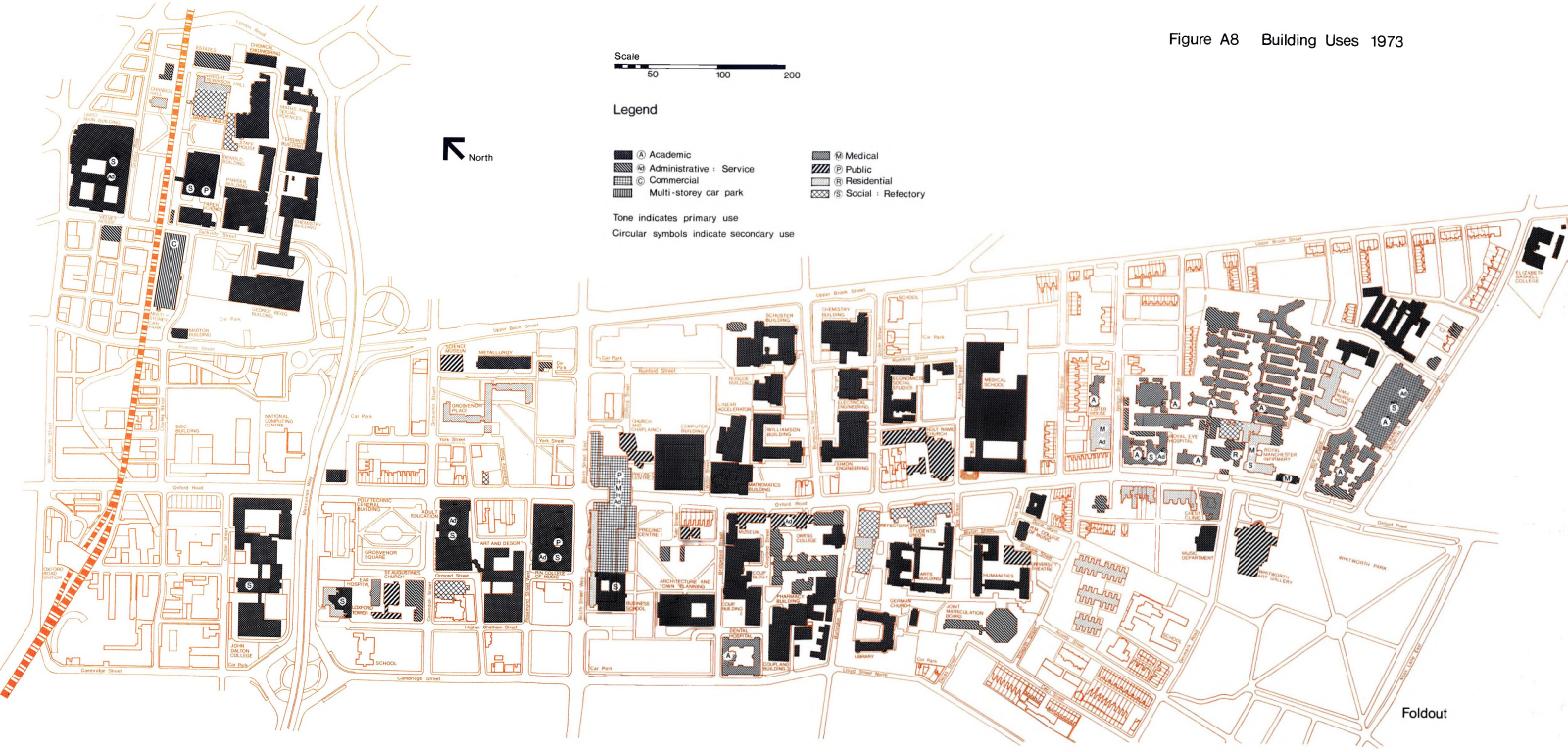


Figure A9 Building Uses
Ultimate Development

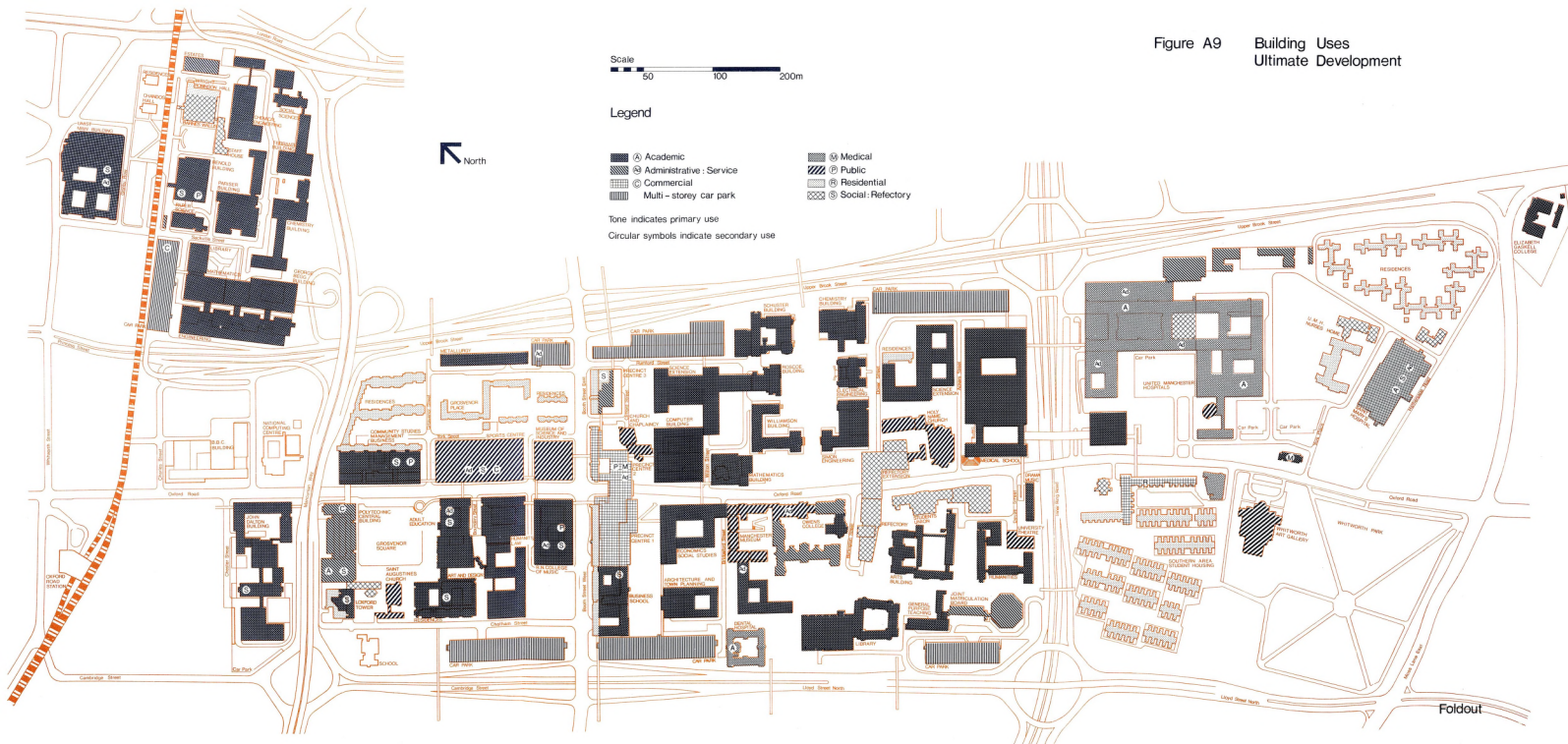


Figure A10 Landscape Structure Plan 1978

North

0 50 100 200m

Legend

- Areas of existing & proposed tree cover (including shrub & ground layers in some areas)
- Areas mainly grassed (also includes shrub & ground cover planting)
- Areas of hard surfacing
- Internal pedestrian routes
- Cycle route
- Pedestrian ways with vehicular access
- Service access
- Pedestrian access
- Upper level walkway
- Main pedestrian routes
- Pedestrian crossings
- Protected Natural area, ecologically balanced planting
- Bus stop
- Activity area
- Sitting area
- Cycle store

UPPER BROOK STREET

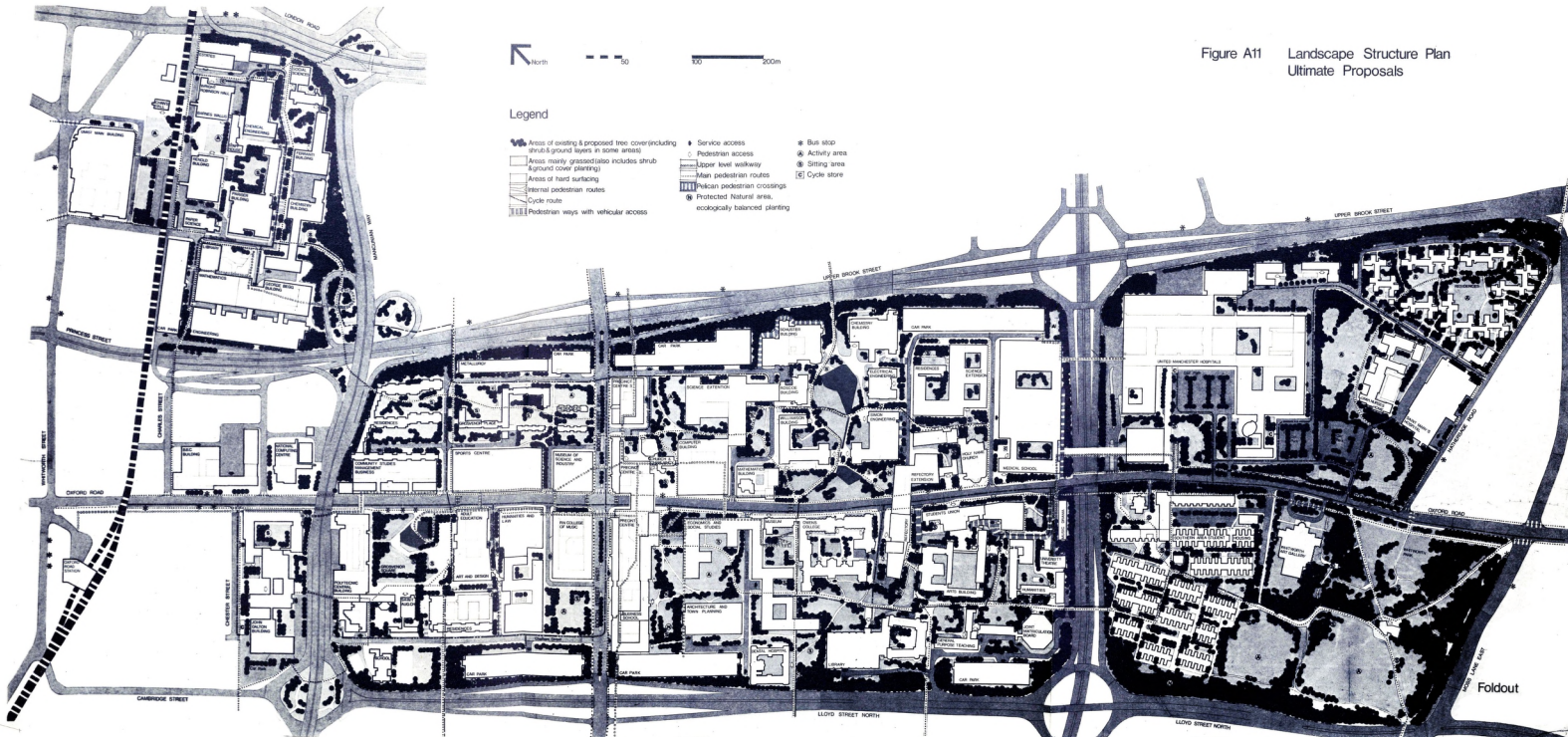
LOWER BROOK STREET

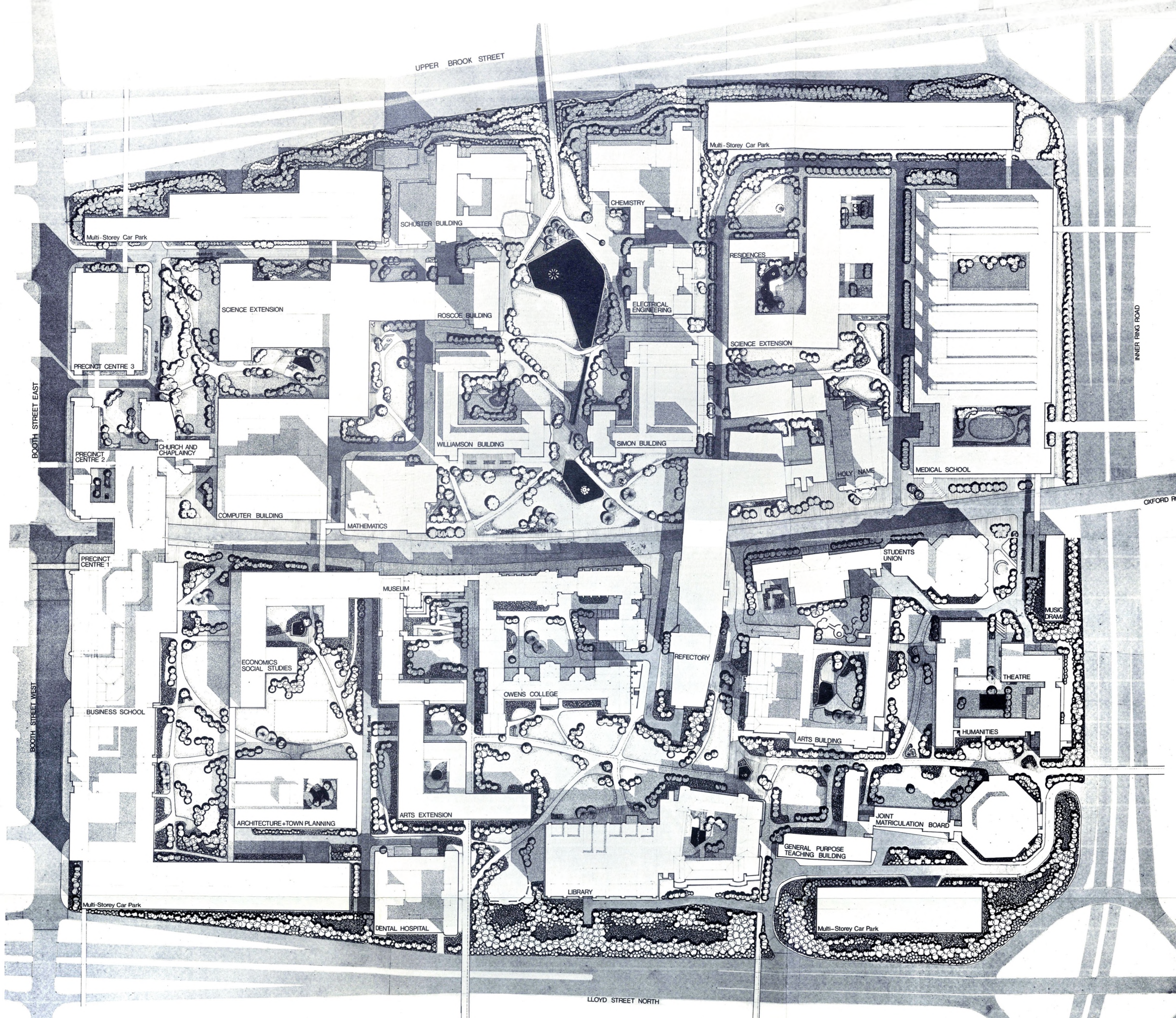
CAMBRIDGE STREET

Foldout

81

Figure A11 Landscape Structure Plan
Ultimate Proposals



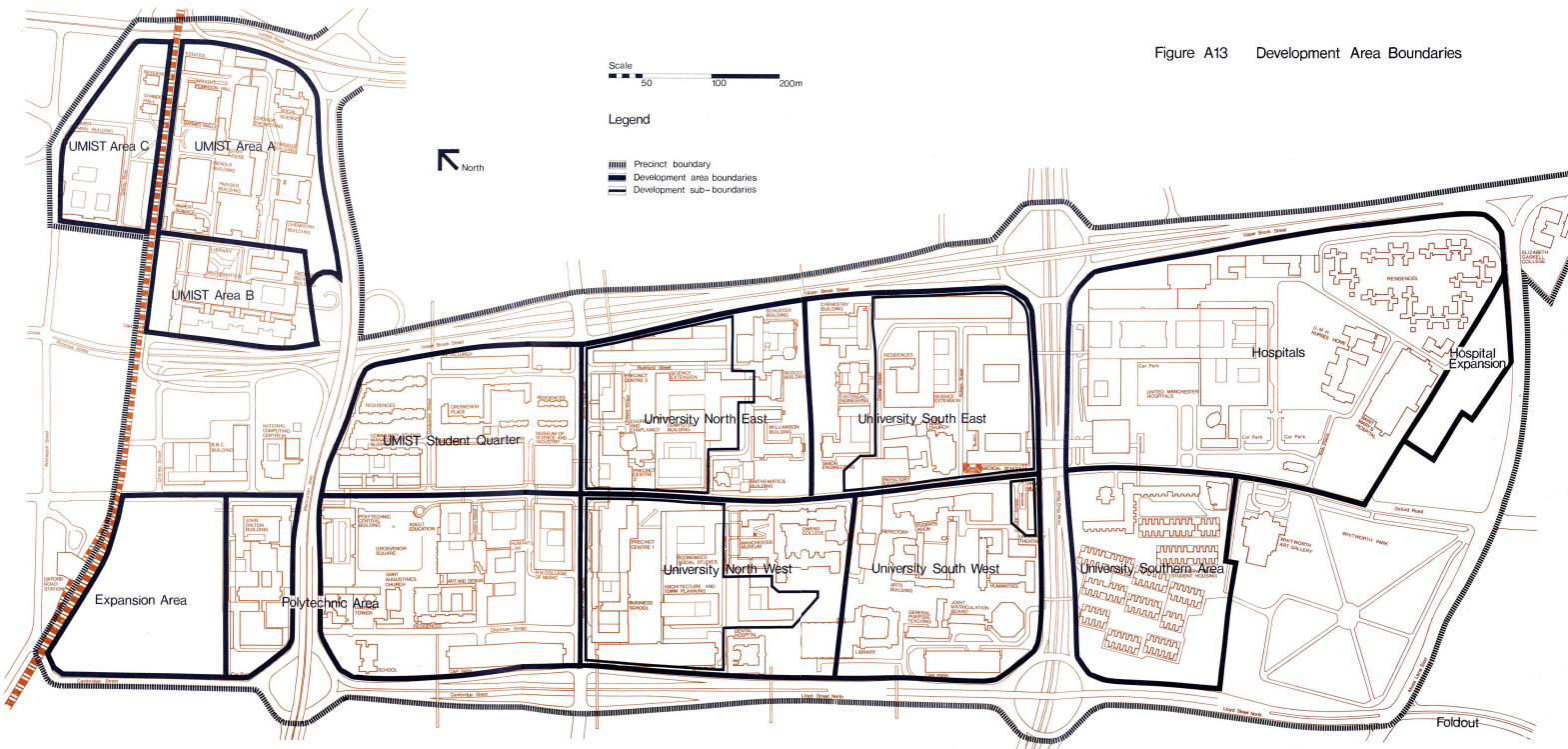


Legend

- | | | |
|----------------------|-----------------------|-----------------------------|
| Roads | Broadleaf Trees | Natural planting & mounding |
| Paved areas | Coniferous Trees | Water |
| Paths & Cycle tracks | Shrubs & Ground cover | |
| Seating | Grass | |

Figure A12
University Area Landscape
Ultimate Proposals

Figure A13 Development Area Boundaries



Appendix B Highway Statistics

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Figure B4 — Turning Movements at Peak Hour (8.30 – 9.30am) – 1972 Flows : Junctions along High Cambridge Street/ Lloyd Street North	93

Figure B1 Road Network 1972

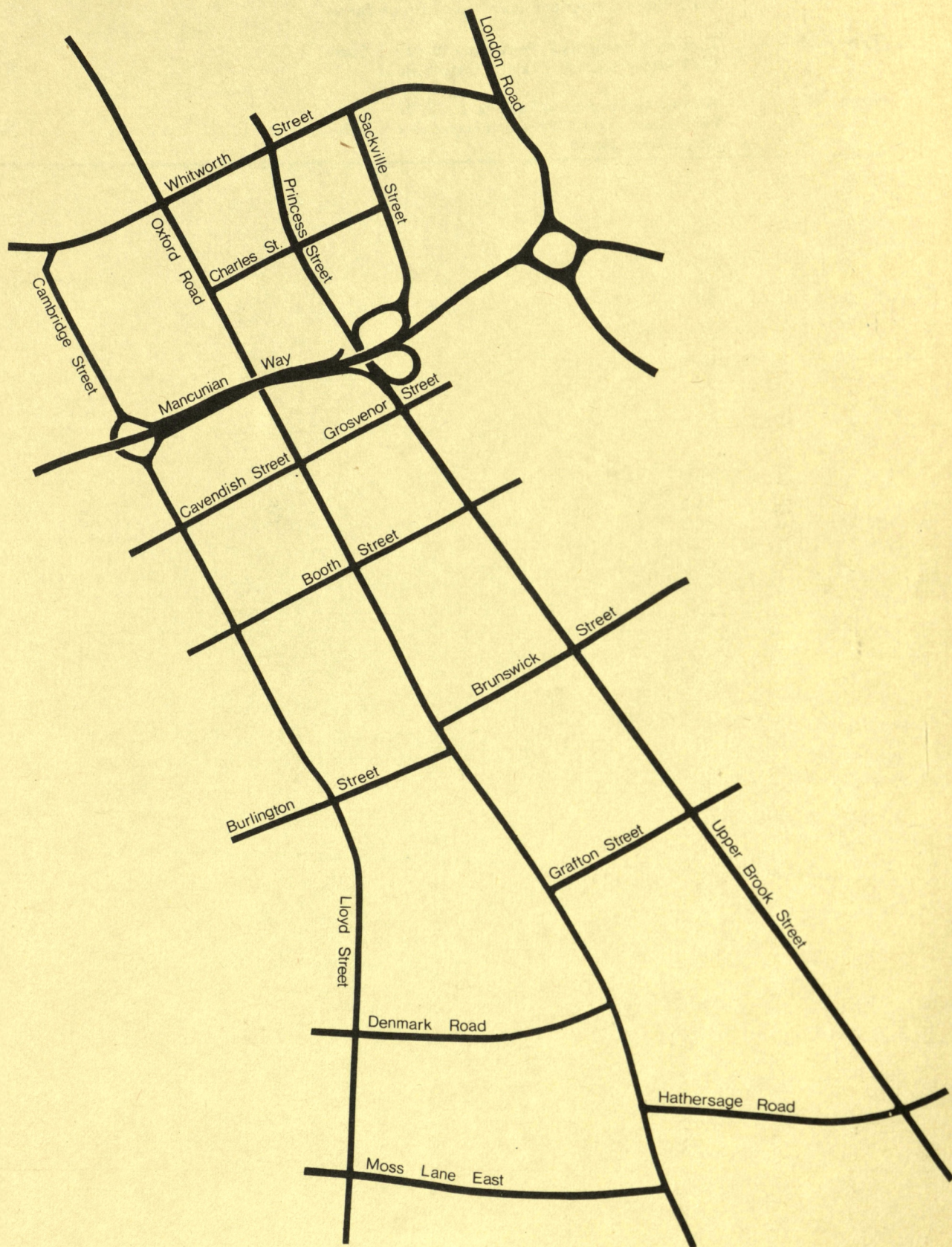
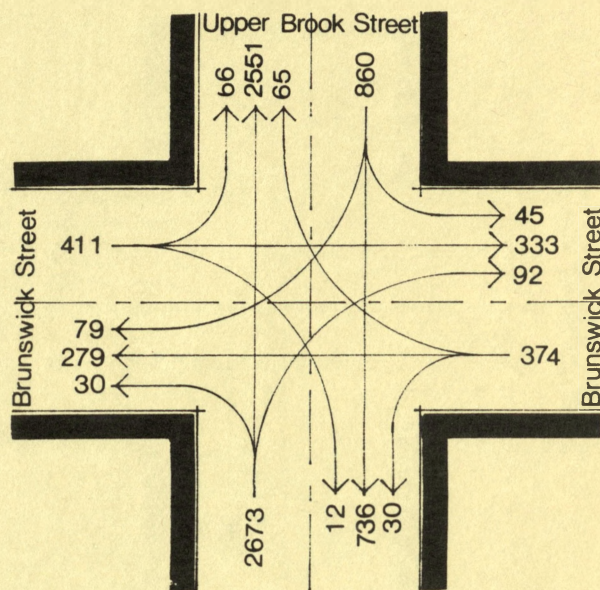
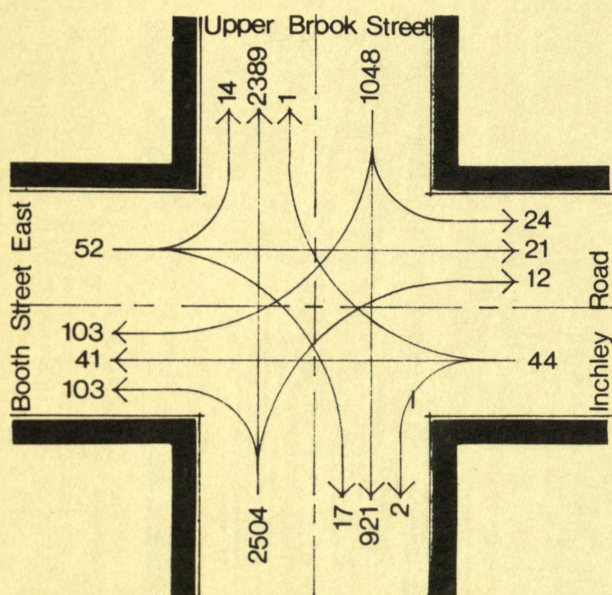


Figure B2 Turning Movements at Peak Hour (8.30 – 9.30am.) – 1972 Flows
Junctions along Upper Brook Street

figures represent number of vehicles per hour

Practical Capacity	4465
Existing Flow	3648
Percentage of Capacity	82
Spare Capacity	817

Practical Capacity	4300
Existing Flow	4318
Percentage of Capacity	100
Spare Capacity	-18



Practical Capacity	2800
Existing Flow	2295
Percentage of Capacity	82
Spare Capacity	505

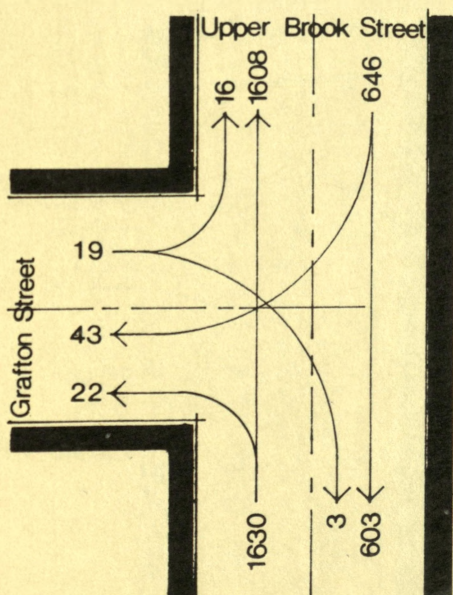
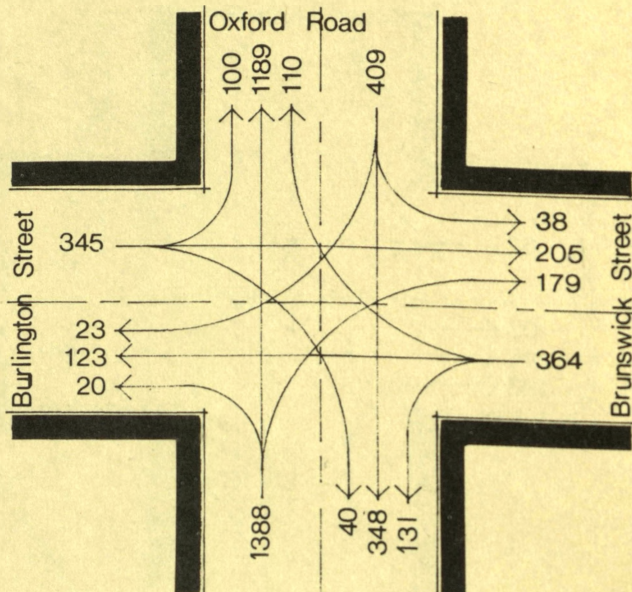
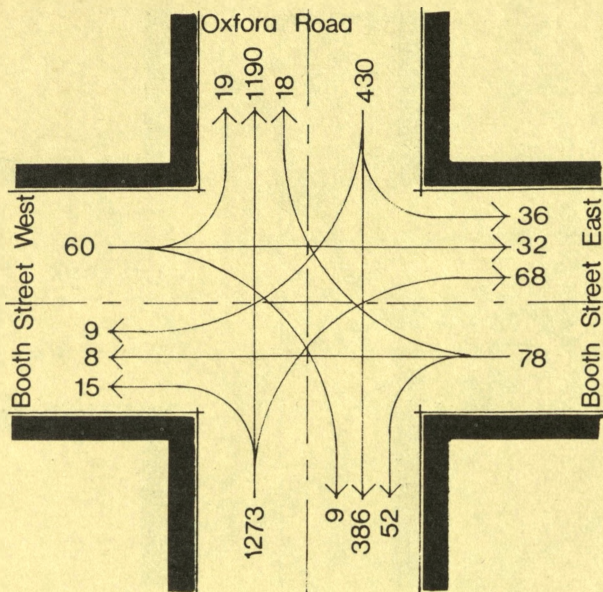


Figure B3 Turning Movements at Peak Hour (8.30 – 9.30am.) – 1972 Flows
Junctions along Oxford Road

figures represent number of vehicles per hour

Practical Capacity	3400
Existing Flow	1842
Percentage of Capacity	55
Spare Capacity	1558

Practical Capacity	2800
Existing Flow	2506
Percentage of Capacity	90
Spare Capacity	294



Practical Capacity	2800
Existing Flow	2123
Percentage of Capacity	76
Spare Capacity	677

Practical Capacity	2800
Existing Flow	1883
Percentage of Capacity	67
Spare Capacity	917

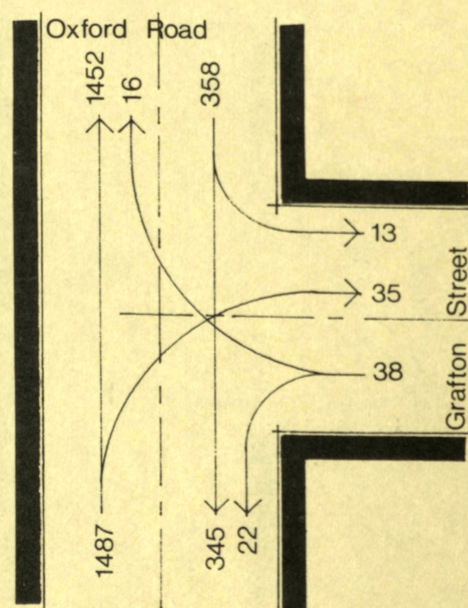
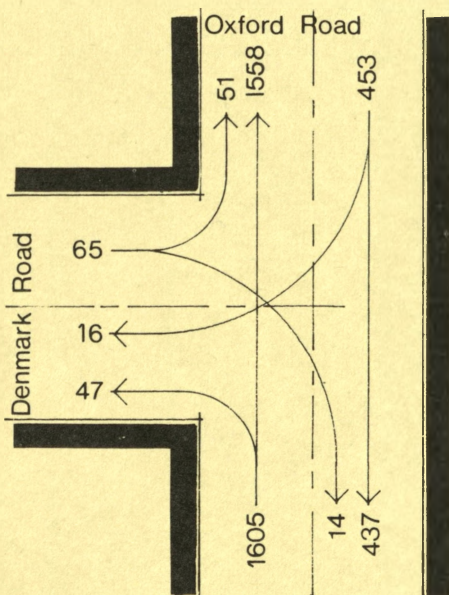
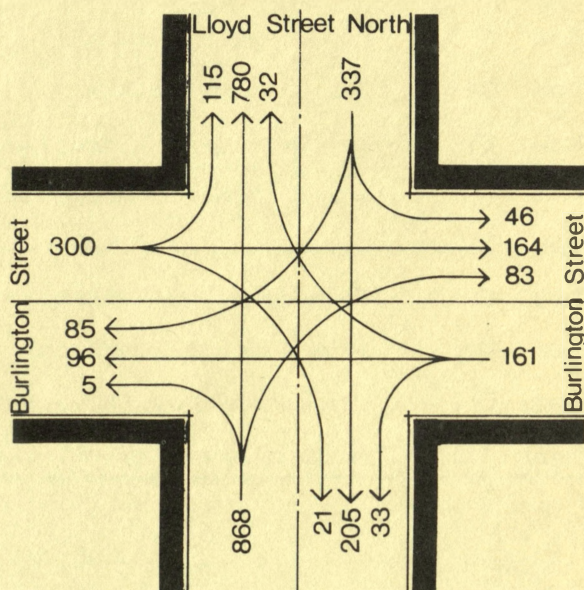
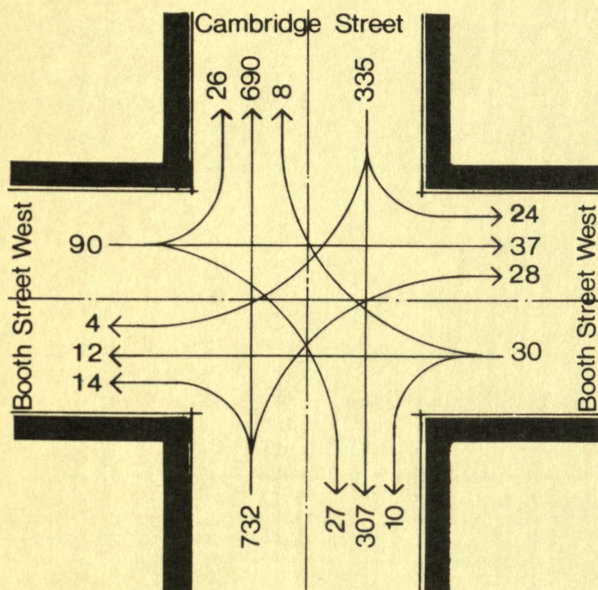


Figure B4 Turning Movements at Peak Hour (8.30 – 9.30am.) – 1972 Flows
Junctions along Higher Cambridge Street / Lloyd Street North

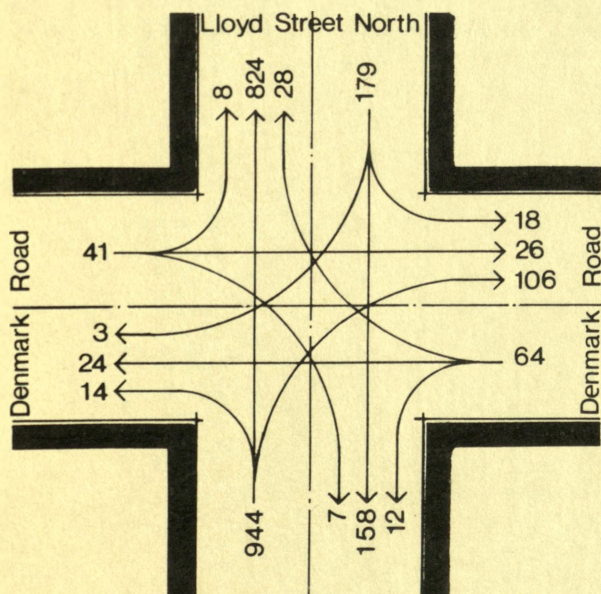
figures represent number of vehicles per hour

Practical Capacity	3785
Existing Flow	1187
Percentage of Capacity	31
Spare Capacity	2598

Practical Capacity	3000
Existing Flow	1666
Percentage of Capacity	55
Spare Capacity	1334



Practical Capacity	3000
Existing Flow	1288
Percentage of Capacity	41
Spare Capacity	1712



Appendix C SELNEC Travel Survey Statistics 1972

			Page No.
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Note: In the following series of Tables total figures are subject to minor rounding-off inaccuracies.

Table C1— Replies by Institution and Status.

	Full-Time Student	Part-Time Student	Academic Staff	Non- Academic Staff	Doctor	Nurse	Admin- Clerical	Prof- Tech	Ancillary	Other	Total
Universtiy	2362	117	593	564	—	—	—	—	—	11	3647
U.M.I.S.T.	260	31	225	294	—	—	—	—	—	2	812
Polytechnic	625	181	248	159	—	—	—	—	—	6	1219
College of Music	99	1	18	4	—	—	—	—	—	—	122
Business School	38	2	33	47	—	—	—	—	—	—	120
M.R.I.	—	—	—	—	22	132	181	119	73	118	645
St. Mary's	—	—	—	—	22	80	92	37	26	20	277
Eye Hospital	—	—	—	—	6	44	32	26	8	13	129
Dental Hospital	—	—	—	—	—	7	15	4	1	2	29
Reject Replies	16	1	13	6	1	7	9	—	2	2	57
Total	3400	333	1130	1074	51	270	329	186	110	174	7057

Table C2 — Weighted Aggregations

	Student	Academic Staff	Non-Academic Staff	Doctor	Nurse	Prof-Tech Admin- Clerical	Ancillary	Total
University	9792	1350	2250	—	—	—	—	13392
U.M.I.S.T.	3609	500	1000	—	—	—	—	5109
Polytechnic	3635	650	1000	—	—	—	—	5285
Business School & College of Music	776	256	104	—	—	—	—	1136
Hospitals	—	—	—	260	928	662	1025	2875
Total	17812	2756	4354	260	928	662	1025	27797

Table C3 – Arrival Times by Institution – Thursday

Time Institution	No Journey Made	Before 0800	0800- 0830	0830- 0845	0845- 0900	0900- 0915	0915- 0930	0930- 1000	1000- 1100	1100- 1200	1200- 1300	1300- 1400	After 1400	Total
University	601 5%	350 3%	368 3%	538 4%	1508 11%	2374 18%	4405 33%	1174 9%	1446 11%	262 2%	98 1%	166 1%	133 1%	13392 48%
U.M.I.S.T.	99 2%	219 4%	444 9%	422 8%	919 18%	2150 42%	290 6%	313 6%	150 3%	2 —	23 1%	24 1%	32 1%	5109 18%
Polytechnic	566 11%	49 1%	460 9%	353 7%	584 11%	1231 23%	1260 24%	312 6%	253 5%	75 1%	52 1%	30 1%	55 1%	5280 19%
Business School and R.N.C.M.	111 10%	25 2%	66 6%	79 7%	179 16%	172 15%	95 8%	143 13%	166 15%	29 3%	15 1%	22 2%	33 3%	1135 4%
M.R.I. St. Mary's Eye Hospital	226 8%	1010 35%	314 11%	334 12%	346 12%	129 5%	53 2%	18 1%	25 1%	38 1%	124 4%	33 1%	218 8%	2868 10%
Total	1603 6%	1653 6%	1652 6%	1726 6%	3536 13%	6056 22%	6103 23%	1960 1%	2040 8%	406 2%	312 1%	275 1%	471 2%	27797

Table C4 – Departure Times by Institution – Thursday

Time Institution	No Journey Made	Before 1200	1200- 1400	1400- 1500	1500- 1600	1600- 1630	1630- 1700	1700- 1730	1730- 1800	1800- 1900	1900- 2000	After 2000	Total
University	648 5%	218 2%	816 6%	450 3%	910 7%	1820 14%	2280 17%	3925 29%	1132 8%	647 5%	197 2%	381 3%	13392 48%
U.M.I.S.T.	115 2%	7 —	156 3%	206 4%	505 10%	525 10%	1528 30%	1292 25%	299 6%	214 4%	67 1%	210 4%	5109 18%
Polytechnic	568 11%	3 —	161 3%	124 2%	414 8%	629 12%	1297 25%	844 16%	335 6%	239 5%	187 4%	479 9%	5280 19%
Business School and R.N.C.M.	107 9%	22 2%	55 5%	52 5%	125 11%	74 7%	147 13%	154 14%	123 11%	148 13%	48 4%	79 7%	1134 4%
M.R.I. St. Mary's Eye Hospital	279 10%	55 2%	169 6%	80 3%	96 3%	243 9%	435 15%	858 30%	108 4%	123 4%	33 1%	386 14%	2865 10%
Total	1717 6%	305 1%	1357 5%	912 3%	2050 6%	3291 12%	5687 20%	7073 26%	1997 7%	1371 5%	532 2%	1535 5%	27797

Table C5 – Modal Split by Status.

Mode	Student	Academic Staff	Non-Academic Staff	Doctor	Nurse	Admin-Clerical Prof-Tech	Ancillary	Total
Bus	7862 44%	480 17%	2232 51%	37 14%	588 63%	427 65%	718 70%	12344 44%
Car Driver	3265 19%	1598 58%	1292 30%	186 71%	200 22%	173 26%	182 18%	6896 25%
Car Passenger	535 3%	54 2%	152 4%	7 3%	44 5%	23 4%	38 4%	853 3%
Walk	3328 19%	75 3%	97 2%	7 3%	83 9%	26 4%	57 6%	3673 13%
Train	1794 10%	497 18%	445 10%	7 3%	0 0%	5 1%	19 2%	2767 10%
Cycle	717 4%	35 1%	72 2%	0 0%	4 0%	5 1%	10 1%	843 3%
Motor Cycle	289 2%	14 1%	49 1%	7 3%	7 1%	3 0%	0 0%	369 1%
Other	23 0%	2 0%	16 0%	7 3%	4 0%	0 0%	0 0%	52 0%
Total	17813 57%	2756 12%	4354 22%	258 1%	930 3%	662 2%	1024 3%	27797

Table C6 – Car Ownership by Institution and Status

	Student	Academic Staff	Non-Academic Staff	Doctor	Nurse	Prof-Tech Admin-Clerical	Ancillary	Total
University	2591 26%	1095 81%	1056 47%					4742
U.M.I.S.T.	914 25%	410 82%	450 45%					1774
Polytechnic	1321 36%	521 81%	440 44%					2282
Business School and College of Music	305 39%	201 79%	33 32%					539
Hospitals				208 80%	258 28%	231 35%	211 21%	908
Total	5131	2227	1979	208	258	231	211	10245

Table C7 – Car Ownership by Modal Split

Mode	Car Owners
Bus	1578
Car Driver	6752
Car Passenger	287
Walk	465
Train	986
Cycle	100
Motor Cycle	57
Other	20
Total	10245

Table C8 – Reason for Choice of Mode

	Cost	Convenience	No Alternative	Short Distance	Speed	Comfort	Reliability	Parking Difficulties	Health	Other	Total
Bus	1349	4100	5387	75	562	160	146	110	40	415	12344
Car Driver	874	4205	293	12	858	199	169	14	33	239	6896
Car Passenger	198	541	25	4	21	13	14	0	0	36	851
Walk	1428	789	83	914	188	34	52	0	83	102	3673
Train	266	947	119	29	1028	146	132	17	9	74	2767
Cycle	382	121	11	1	142	0	19	11	7	149	843
Motor Cycle	192	79	0	0	65	4	15	0	0	14	369
Other	24	21	0	0	0	0	0	0	0	7	52
Total	4713	10803	5918	1035	2864	556	547	152	172	1036	27797
	17%	39%	21%	4%	10%	2%	2%	1%	1%	4%	

Table C9 — Comments on Local Transport Facilities by Modal Split

Comments	Mode	Bus	Car Driver	Car Passenger	Walk	Train	Cycle	Motor Cycle	Other	Total
No Comment		3248	2635	323	1518	1022	261	72	14	9093
Public transport expensive		1220	680	107	559	139	86	148	16	2955
Poor Frequency (all day)		1087	504	71	156	217	85	8	3	2131
Good Service		820	256	96	296	180	70	28	5	1751
Poor Frequency (peak)		964	234	28	140	98	29	9	0	1502
Poor Service		463	352	21	51	116	37	7	5	1052
Bunching		845	112	36	104	29	14	6	0	1146
Need for Special Service		565	160	5	56	54	8	4	0	852
Poor Reliability		353	265	19	37	102	4	16	0	796
More Route Information		343	187	13	81	110	48	4	0	786
Speed		257	273	17	31	77	4	12	0	671
Free Buses		296	161	27	199	66	47	14	0	810
Against OMO		363	120	6	87	22	24	8	0	630
Crowded Public Transport		296	57	14	33	67	15	0	3	485
More Integration		211	170	19	18	85	0	7	0	509
Unpleasant Crews		201	75	16	74	23	4	0	3	396
Ban Cars		163	112	11	64	81	53	9	0	493
More Late Night Buses		245	75	21	55	118	31	13	0	557
Congestion		98	123	9	25	77	6	0	0	339
Parking Difficulties		23	159	0	35	37	6	4	3	267
More Bus Lanes		112	68	0	11	29	4	0	0	224
More Shelters		116	43	0	21	0	0	0	0	181
Public Transport Dirty		61	74	0	22	18	7	0	0	182
Total		12350	6896	859	3673	2767	843	369	52	27797

Table C10 — Interest in Season Tickets by Modal Split

	No Interest	Weekly	Monthly	Termly	No Preference	Total Interested	% of Mode
Bus	2469	1343	2450	5163	919	9875	80%
Car Driver	4758	236	416	1321	165	2138	31%
Car Passenger	521	60	47	189	36	332	39%
Walk	2865	70	187	482	69	808	22%
Train	802	217	465	1126	157	1965	71%
Cycle	590	12	53	159	29	253	30%
Motor Cycle	280	23	7	52	7	89	24%
Other	48	0	0	4	0	4	8%
Total No Interest	12333						
Totals Interested		1961 7%	3525 13%	8496 31%	1382 5%*	15464	56%*

* % of population.

Table C11 – Ease and Frequency of Parking – On street

	Average No. of Times Per Week							Total
	Less than 1	1	2	3	4	5	More than 5	
Easy	1073	173	138	83	63	711	126	2367
Difficult	292	140	109	67	26	549	63	1246
Neither	142	67	52	28	26	276	109	700
Total	1507	380	299	178	115	1536	298	4313*

* When allowance has been made for the lack of frequency of travel in the various column totals, i.e. divide totals of 1 day per week drivers by 5, 2 day drivers by 2/5, etc., the average number of trips on any one day is 2380.

Table C12 – Ease and Frequency of Parking – In Car Parks

	Average No. of Times Per Week							Total
	Less than 1	1	2	3	4	5	More than 5	
Easy	108	366	239	195	136	2420	373	3837
Difficult	80	96	77	37	35	469	43	837
Neither	45	36	38	30	21	308	38	516
Total	233	498	354	262	192	3197	454	5190*

*When allowance has been made for the lack of frequency of travel in the various column totals, i.e. divide totals of 1 day per week drivers by 5, 2 day drivers by 2/5 etc., the average number of trips in any one day is 4220.

Table C13 – Views of Users on Cost of Parking

Car Users (Incl. passenger				Non Car Users		
Cost p. per day	Count	%	Cum %	Count	%	Cum %
0 – 4	3010	39	39	14515	72	72
5 – 9	1221	16	55	1002	5	77
10 – 14	1913	25	80	2381	12	89
15 – 19	523	7	87	897	5	94
20 – 29	898	12	99	1017	5	99
30 – 39	88	1	100	137	1	100
40 – 49	48	—		47	—	
50 – 99	48	—		52	—	
	7749			20048		

Figure C14 Distribution of Residences by Institution, Status and Zone

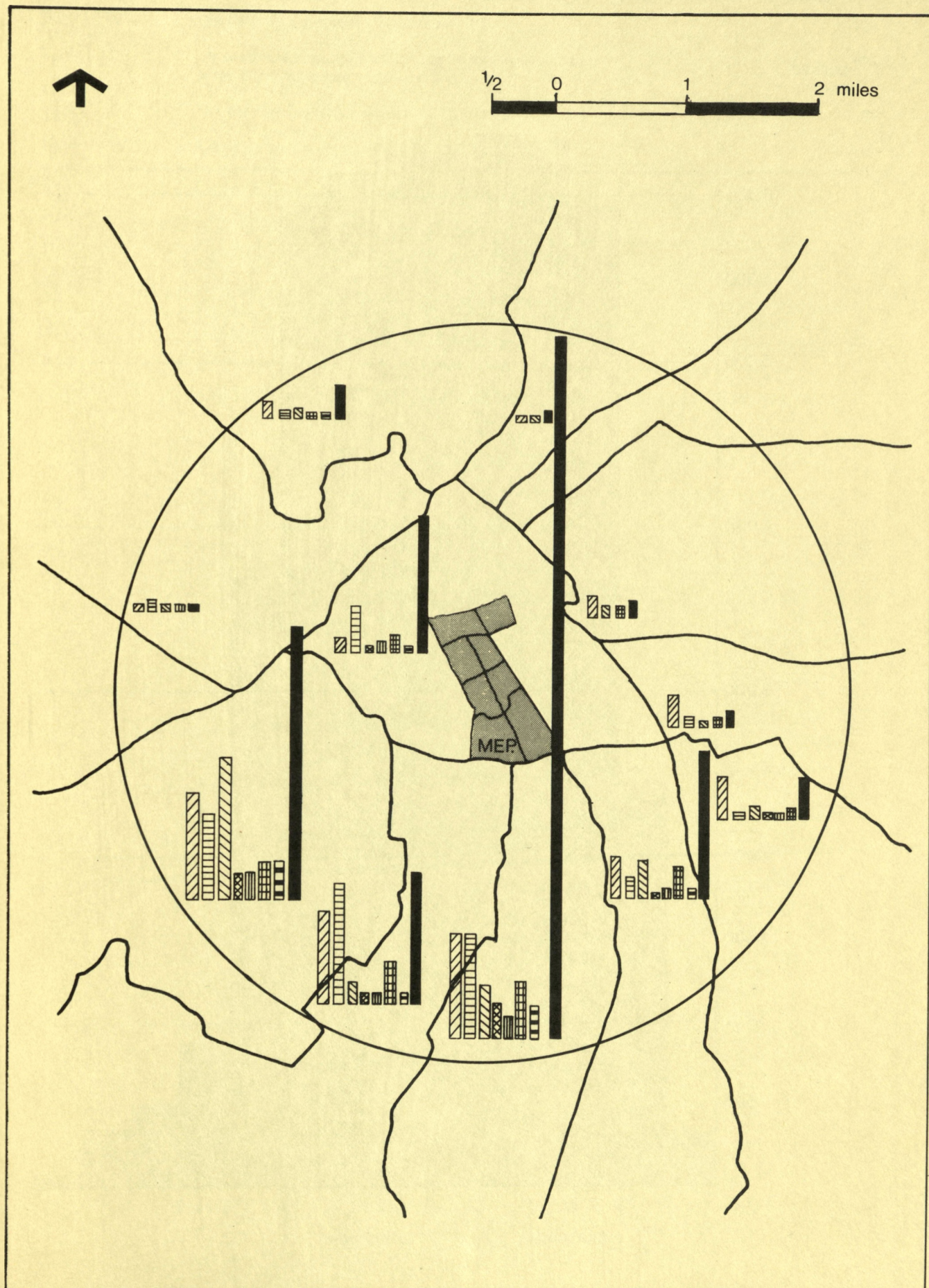
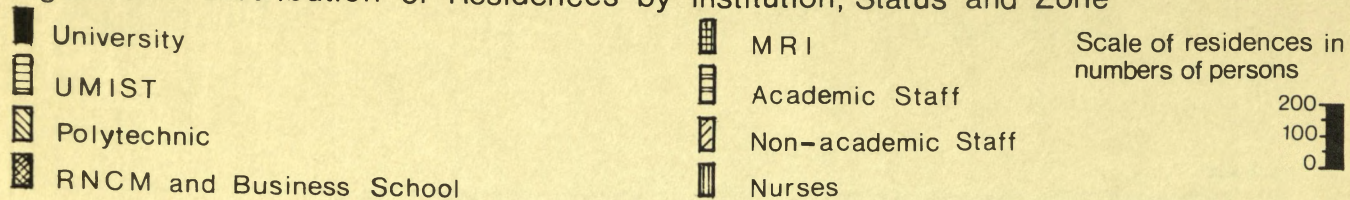
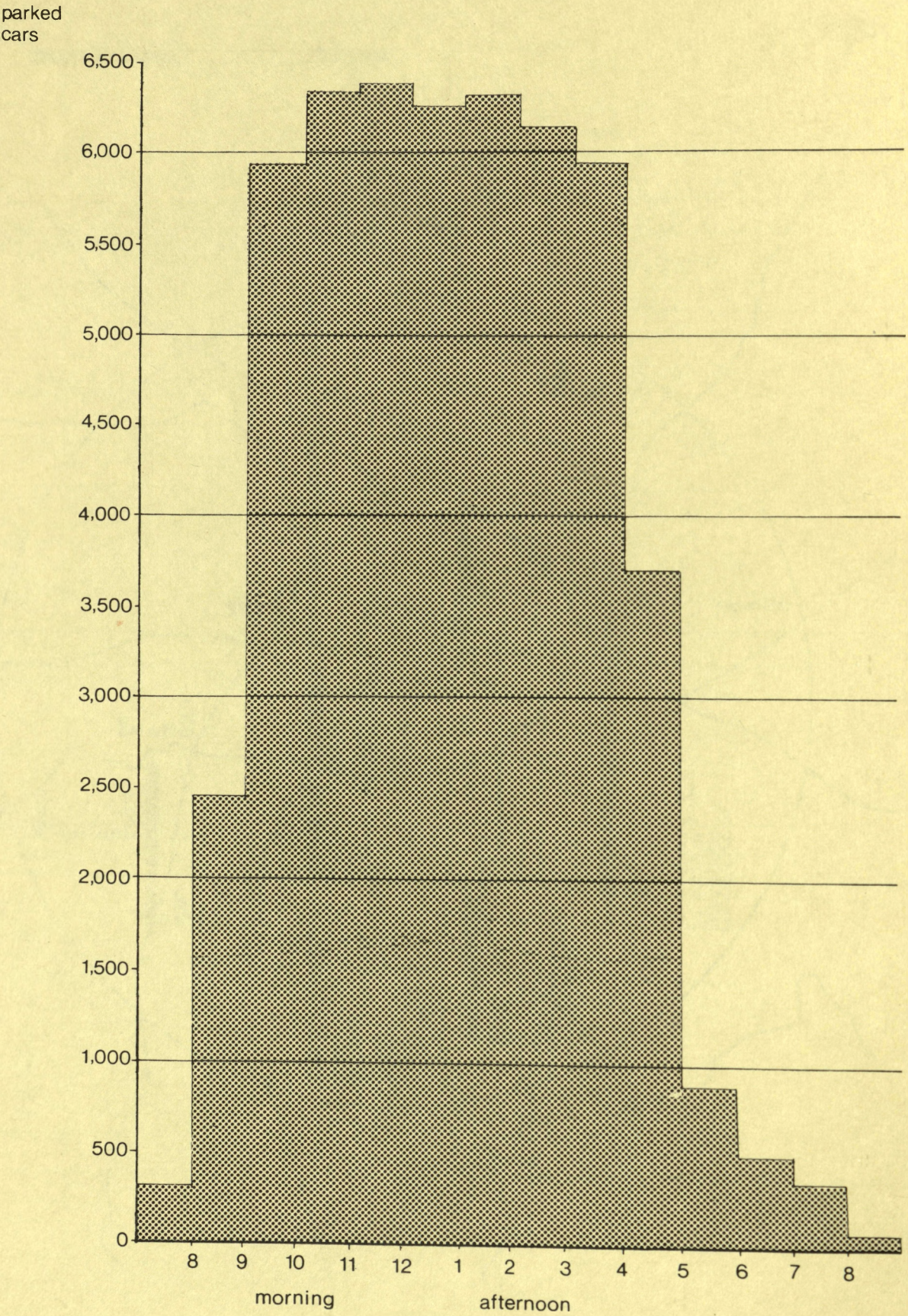


Figure C15 Parking by Time of Day (1972) – All Institutions



Appendix D Car Parking Statistics

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Table	D3	—	Visitor Parking Requirements 1973 and 1984	105
Table	D4	—	Demand for Car Parking Spaces 1973 and 1984	106

Table D1 – Car Parking Capacities – September 1972

University Area	
On-street parking	1395*
Surface parking	1734
Miscellaneous	50
University Area Total	3179

Polytechnic Area	
On-street parking	360*
Municipal car park	185
Surface parking	160
Polytechnic Area Total	705

Summarised Totals

Total On-Street Parking	
University area	1395
U.M.I.S.T. area	142
Polytechnic area	360
United Manchester Hospitals area	643
Total	2540*

Grand Total	
University area	3179
U.M.I.S.T. area	1869
Polytechnic area	705
United Manchester Hospitals area	1363
MEP Car Parking Capacity	7116

U.M.I.S.T. Area	
On-street parking (Student Quarter area)	142*
Municipal car park (Student Quarter area)	425
Surface parking in areas A and C	142
Multi-storey car park (50% municipal)	840
Surface car park	320
U.M.I.S.T. Total Area	1869

United Manchester-Hospitals Area	
On-street parking	643*
Surface parking	620
Miscellaneous	100
U.M.H. Area Total	1363

Total Controlled Parking	
University area	1784
U.M.I.S.T. area	1302
Polytechnic area	160
United Manchester Hospitals area	720
Municipal Car Parks	610
Total	4576

* Estimate: a space count based in part on survey and assuming 5.3m linear per car.

Table D2 – Maximum Number of Car Parking Spaces in designated areas fully developed at ground level.

University Area	
North East	500
North West	475
South East	600
South West	285
Miscellaneous	40
Total	1900

U.M.I.S.T. Area	
Areas A and C	139
Area B – Multi-storey	420
Boiler House car park	56
Total	615

Municipal	
Multi-storey	420

Polytechnic Area	
John Dalton car park	160
Booth Street West (North)	475*
Adult Education	6
Total	641

Hospitals Area	
Total	950

University Area	1900
U.M.I.S.T. Areas	615
Municipal	420
Polytechnic Area	641
Hospital Area	950
Total	4526

* Only a proportion of this figure will be under Polytechnic control.

Table D3 – Visitor Parking Requirements 1973 and 1984

These figures have been supplied by the individual Institutions

In 1973:

Non-Institutional Visitors	
University	350
U.M.I.S.T.	21
College of Music	20
Total	391

Institutional Visitors	
University	250
U.M.I.S.T.	62
Polytechnic	50
College of Music and Adult Education	12
Hospitals	150
Total	524

By 1984:

Non-Institutional Visitors		
University		
Regional Computer Centre	20	
Precinct Centre	90	
Business School	115	
Theatre	45	
Museum and Whitworth Art Gallery	35	
Dental Hospital	135	
Church and Chaplaincy	20	
JMB	30	
Audiology (Humanities)	10	500
U.M.I.S.T.		
Multi-Storey car park Sub-Centre	10	
Science Museum	11	
Sports Centre	75	96
College of Music		20
Total		616

Institutional Visitors	
University	400
U.M.I.S.T.	75
Polytechnic	75
College of Music and Adult Education	12
Hospitals	250
Total	812

Table D4 – Demand for Car Parking Spaces 1973 and 1984

Mid 1973

	Academic*	Non-Academic	Students**	Visitors***	Totals
Staff	Staff				
University	755	675	143	600	2173
U.M.I.S.T.	262	300	56	83	701
Polytechnic	376	186	56	50	668
N.C.M. and C.A.E.	117	48	16	32	213
Hospitals	120	940	106	150	1316
Totals	1630	2149	377	915	5071

Mid 1984

University	985	1020	200	900	3105
U.M.I.S.T.	406	420	82	171	1079
Polytechnic	580	330	91	75	1076
N.C.M. and C.A.E.	120	50	17	32	219
Hospitals	124	890	101	250	1365
Totals	2215	2710	491	1428	6844

* Assessed on basis of % car use from SELNEC Survey 1972 (Appendix C, Table C5).

** Student allocation assessed as 10% of the demand of academic/non academic staff.

*** Estimates by the different Institutions.

Appendix E Waiting Restrictions

proposed by the City Engineer and the Manchester
and Salford Police which are likely to be
implemented during 1974

Page No.

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Schedule E1 – No Waiting at any time

1	Ackers Street	—	on the south side from Oxford Road to a point 3.6 metres (12 feet) east of the easterly kerbline of Portsmouth Street.
2	Blyton Street	—	on the west side
3	Brisbane Street	—	on the west side
4	Rumford Street	—	on both sides from Booth Street East to Clifford Street
5	Spa Street	—	on the north side from Oxford Road westwards to the cul-de-sac end

Schedule E2 – No waiting – 8.0am to 6.30pm Monday to Friday 8.0am to 12.30pm Saturday

1	Ackers Street	—	on the north side from Oxford Road to a point 3.6 metres (12 feet) east of the easterly kerbline of Portsmouth Street
2	Blyton Street	—	(a) On the east side from Spa Street to a point 9.1 metres (30 feet) south of Spa Street (b) on the east side from Devas Street to a point 9.1 metres (30 feet) north of Devas Street
3	Boundary Street East	—	on the north side from Oxford Road to York Street
4	Boundary Street West	—	(a) on both sides from Oxford Road to Jenkinson Street (b) on both sides from Higher Ormond Street to Higher Cambridge Street
5	Brisbane Street	—	on the east side
6	Clifford Street	—	on the north side from Rumford Street westwards to the cul-de-sac end
7	Cowcill Street	—	on both sides from Boundary Street West to Rosamond Street West
8	Devas Street	—	(a) on the south side from Oxford Road to Brisbane Street (b) on the north side from Oxford Road to a point 9.1 metres (30 feet) west of Oxford Road (c) on the north side from a point 9.1 metres (30 feet) east of Blyton Street to Brisbane Street
9	Ducie Grove	—	on the west side from Devas Street to Dilworth Street
10	Goulden Street	—	on both sides
11	Higher Chatham Street	—	(a) on both sides from Cavendish Street to a point 9.1 metres (30 feet) south of Cavendish Street (b) on both sides from a point 9.1 metres (30 feet) north of Boundary Street West to a point of 9.1 metres (30 feet) south of Boundary Street West (c) on both sides from Rosamond Street West to a point 9.1 metres (30 feet) north of Rosamond Street West
12	Higher Ormond Street	—	(a) on the east side from Cavendish Street to Boundary Street West (b) on the east side from Rosamond Street West to Booth Street West (c) on the west side from Cavendish Street to a point 9.1 metres (30 feet) south of Cavendish Street (d) on the west side from Boundary Street West to a point 9.1 metres (30 feet) north of Boundary Street West (e) on the west side from Rosamond Street West to a point 9.1 metres (30 feet) south of Rosamond Street West (f) on the west side from Booth Street West to a point 9.1 metres (30 feet) north of Booth Street West
13	Higher York Street	—	on both sides from Booth Street East to a point 9.1 metres (30 feet) north of Booth Street East
14	Jenkinson Street	—	(a) on the east side from Boundary Street West to Rosamond Street West (b) on the west side from Rosamond Street West to a point 9.1 metres (30 feet) north of Rosamond Street West (c) on both sides from Tuer Street northwards to the cul-de-sac end
15	Oliver Street	—	on both sides

16	Rosamond Street West		(a) on the south side from Oxford Road to Higher Cambridge Street (b) on the north side from Oxford Road to a point 9.1 metres (30 feet) west of Oxford Road (c) on the north side from Higher Cambridge Street to a point 9.1 metres (30 feet) east of Higher Chatham Street
17	Sidney Street	—	(a) on the north side (b) on the south side from Oxford Road to a point 9.1 metres (30 feet) east of Oxford Road (c) on the south side from York Street to a point 9.1 metres (30 feet) west of York Street
18	Spa Street	—	on the south side from Oxford Road westwards to the cul-de-sac end
19	Tuer Street	—	(a) on both sides from Oxford Road to a point 9.1 metres (30 feet) west of Oxford Road (b) on the south side from Oliver Street to a point 9.1 metres (30 feet) east of Oliver Street
20	York Street	—	(a) on the west side from Sidney Street to Grosvenor Street (b) on the west side from Rusholme Road to a point 9.1 metres (30 feet) north of Rusholme Road (c) on the east side from Sidney Street to Mark Lane (d) on the east side from a point 9.1 metres (30 feet) north of Grosvenor Street to a point 9.1 metres (30 feet) south of Grosvenor Street (e) on the east side from Rusholme Road to a point 23.8 metres (78 feet) north of Rusholme Road

Schedule E3 — Limited Waiting — 2 hours in any 3 hours 8.0am to 6.30pm Monday to Friday. 8.0am to 12.30pm Saturday

1	Blyton Street	—	on the east side from a point 9.1 metres (30 feet) south of Spa Street to a point 9.1 metres (30 feet) north of Devas Street
2	Boundary Street East	—	on the south side from Oxford Road to York Street
3	Clifford Street	—	on the south side from Rumford Street westwards to the cul-de-sac end
4	Devas Street	—	on the north side from a point 9.1 metres (30 feet) east of Blyton Street to a point 9.1 metres (30 feet) west of Oxford Road
5	Ducie Grove	—	on the east side from Devas Street to Dilworth Street
6	Higher Chatham Street	—	(a) on both sides from a point 9.1 metres (30 feet) south of Cavendish Street to a point 9.1 metres (30 feet) north of Boundary Street West (b) on both sides from a point 9.1 metres (30 feet) south of Boundary Street West to a point 9.1 metres (30 feet) north of Rosamond Street West
7	Higher Ormond Street	—	(a) on the west side from a point 9.1 metres (30 feet) south of Cavendish Street to a point 9.1 metres (30 feet) north of Boundary Street West (b) on the west side from a point 9.1 metres (30 feet) south of Rosamond Street West to a point 9.1 metres (30 feet) north of Booth Street West
8	Higher York Street	—	on both sides from a point 9.1 metres (30 feet) north of Booth Street East to Rosamond Street East
9	Jenkinson Street	—	on the west side from Boundary Street West to a point 9.1 metres (30 feet) north of Rosamond Street West
10	Rosamond Street West	—	on the north side from a point 9.1 metres (30 feet) west of Oxford Road to a point 9.1 metres (30 feet) east of Higher Chatham Street
11	Sidney Street	—	on the south side from a point 9.1 metres (30 feet) east of Oxford Road to a point 9.1 metres (30 feet) west of York Street
12	Tuer Street	—	(a) on the south side from a point 9.1 metres (30 feet) west of Oxford Road to a point 9.1 metres (30 feet) east of Oliver Street (b) on the north side from a point 9.1 metres (30 feet) west of Oxford Road to Jenkinson Street
13	York Street	—	(a) on the west side from Grosvenor Street to a point 9.1 metres (30 feet) north of Rusholme Road (b) on the east side from Mark Lane to a point 9.1 metres (30 feet) north of Grosvenor Street (c) on the east side from a point 9.1 metres (30 feet) south of Grosvenor Street to a point 23.8 metres (78 feet) north of Rusholme Road

Schedule E4 – Amendments to Existing Orders

Order	Length of road affected	Present Restrictions	Proposed Amendments
The City of Manchester (Oxford Road/Wilmslow Road and Brook Street/ Upper Brook Street) (No Waiting) Order, 1961.	Rusholme Road– both sides from Oxford Road to York Street.	1st Schedule item 2 No Waiting 8.00am to 6.00pm. Monday to Friday.	(a) Amend working day restriction to apply 8.00am to 6.30pm Monday to Friday and 8.00am. to 12.30pm Saturday. (i) on both sides from Oxford Road to a point 9.1 metres (30 feet) east of Oxford Road. (ii) on the north side from York Street to a point 9.1 metres (30 feet) west of York Street. (b) Impose limited waiting 2 hours in 3, 8.00am to 6.30pm., Monday to Friday, 8.00am to 12.30pm Saturday. (i) on the south side from York Street to a point 9.1 metres (30 feet) east of Oxford Road. (ii) on the north side from a point 9.1 metres (30 feet) east of Oxford Road to a point 9.1 metres (30 feet) west of York Street.
The City of Manchester Traffic Regulation Order (No. 1) 1963.	Higher Cambridge Street south west side, from Coupland Street to a point 120 feet south of Cavendish Street. Lloyd Street North both sides, Devas Street to Denmark Road.	Monday to Friday - No Waiting 8.00am to 9.30am., 4.30pm. to 6.00pm. Saturday 8.00am to 9.30am.	Amend present peak hour waiting restrictions (i.e. Monday to Friday) to apply Monday to Friday 8.00am to 6.00pm. Saturday 8.00am to 12.30pm. —ditto—

Appendix F Population Statistics

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Table F1 – Precinct Population

At 1973:

	FT Students	*PT Students	Academic Staff	Non-Acad. Staff	Totals
University (incl. Business School)	9360	400	1300	2250	13310
U.M.I.S.T.	3350	—	500	1000	4850
Polytechnic	4200	490	650	620	5960
College of Music	500	—	95	60	655
Adult Education	—	1000	62	38	1100
Elizabeth Gaskell	1000	—	70	30	1100
Hospitals	400	—	*** 170	3130	3700
Totals	18810	1890	2847	7128	30675

By 1984:

University (incl. Business School)	14365	600	1680	3400	20045
U.M.I.S.T.	6000	—	700	1400	8100
Polytechnic	** 6000	845	1000	1100	8945
College of Music	600	—	110	70	780
Adult Education	—	1500	62	38	1600
Elizabeth Gaskell	1000	—	70	30	1100
Hospitals	760	—	*** 175	2965	3900
Totals	28725	2945	3797	9003	44470

* Note that the figure for part time students is shown as a full time equivalent (F.T.E.) based on day time students only. The F.T.E. figures are used here as they form the basis for calculations of building space and transportation requirements.

** Note that the planned student capacity within the Polytechnic Development Plan is for 6,000 full time and 6,000 part time students by 1980 but that the Governing Body has accepted as a possible ultimate total a figure of 9,000 full time and 9,000 part time students. Any such increase would need to take place by expansion north of Chester Street.

*** Medical Staff.

Table F2 – Student Residences in the Precinct in 1973

University:

Moberly Tower	196	
Cornbrook House	234	
Business School 1	154	584

U.M.I.S.T.:

Chandos Hall	161	
Wright Robinson	165	
Grosvenor Place	470	796

Polytechnic:

Loxford Tower	200	200
---------------	-----	-----

Hospitals:

* Existing Residential Accommodation	713	713
---	-----	-----

Total		2293
-------	--	------

* Consists of accommodation at:

Royal Infirmary — Sparshott House and Cobbett House
 Royal Eye Hospital — Nurses Home
 St. Mary's Hospital
 Nelson Street Physiology Student accommodation
 Other miscellaneous accommodation grouped in small numbers.

Table F3 — Student Residences in the Precinct by 1984

University:			
	Moberly Tower	196	
	Cornbrook House	234	
	Business School 1	154	
	Southern Area	2054	
	Precinct Centre 3	150	
	Dover Street	100	2888
U.M.I.S.T.:			
	Chandos Hall	161	
	New Hall on adjacent site	160	
	Wright Robinson	165	
	Grosvenor Place	470	
	Student Quarter (N)	650	
	Student Quarter (S)	240	1846
Polytechnic:			
	Loxford Tower	200	
	Site 2	200	
	Site 4	200	*600
Hospitals:			
	New Housing	669	
	Existing Accommodation:		
	Sparshott House	188	
	St. Mary's Hospital	50	
	Royal Eye Hospital	40	947
Total			6281

- * Should it be decided to expand the Polytechnic North of Chester Street to a total capacity of 9,000 full time students there would be an increase of residential accommodation by a further 600 places.

Table F4 — Students Residential Accommodation outside but near to the Precinct on the south side

At mid 1973:	3083
By mid 1984:	4721

Appendix G Land Areas and Gross Floor Areas of Buildings

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Table G1 — University North-West and Owens

Land Area 91 500m²

	at 1973 m ²	Ultimate m ²
Buildings Existing in 1973:—		
Precinct Centre 1	22480	22480
Business School 1	12080	12080
Architecture and Town Planning	10030	10030
Owens	7530	7530
Whitworth Hall	3960	3960
Museum	5980	5980
Metallurgy	2070	
Coupland Street Building	10680	
Beyer Building	2530	2530
Botany	780	
Old Chemistry Building	4740	
Lapworth Laboratories	580	
Dixon Laboratories	630	
Old Medical School	10760	
Central Boiler House	420	
Dental Hospital	5750	5750
Sub-Totals	100820	70160
Planned Projects:—		
Multi-storey Car Park		29260
Library Extension (2/3 whole)*		18580
Manchester Museum		12500
Business School 2		6780
Sub-Totals		137280
Spare Capacity for Future Expansion:—		
Bridgeford Street — Precinct Centre		20000
Bridgeford Street — Burlington Street		12000
Total		169280

Average Development Density — 1.85

- * The Area notional boundary passes through the planned Library Extension, some two thirds of which will exist in this area.

Table G2 — University South-West

Land Area 78 500m²

	at 1973 m ²	Ultimate m ²
Buildings Existing in 1973:—		
Refectory and Moberly House	13660	13660
Library	8070	8070
Students Union	6390	6390
Arts Building	7290	7290
Arts Extension	8270	8270
Humanities and Theatre	12830	12830
German Church (Drama)	300	
Joint Matriculation Board	4650	4650
Sub-Totals	61460	61160
Planned Projects:—		
Library Extension (1/3 whole)*		9290
Union Extension		6000
General Purpose Teaching Building		6150
Multi-storey Car Park		10000
Sub-Totals		92600
Spare Capacity for Future Expansion:—		
Union Extension — Inner Ring Road		3500
Total		96100

Average Development Density — 1.2

- * The Area notional boundary passes through the planned Library Extension, some one third of which will exist in this area.

Table G3 – University North-East

Land Area 84 500m²

	at 1973 m ²	Ultimate m ²
Buildings Existing in 1973:—		
Precinct Centre 2	9070	9070
Computer	16880	16880
Mathematics	9560	9560
Linear Accelerator	2060	
Church and Chaplaincy	2320	2320
Schuster	15510	15510
Roscoe	6030	6030
Williamson	15570	15570
Sub-Totals	77000	74940
Planned Projects:—		
Precinct Centre 3		12000
Multi-storey Car Park		32520
Sub-Total		119460
Spare Capacity for Future Expansion:—		
East of Computer Building		30000
Total		149460

Average Development Density — 1.8

Table G4 – University South-East

Land Area 91 500m²

	at 1973 m ²	Ultimate m ²
Buildings Existing in 1973:—		
Simon Engineering	19370	19370
Electrical Engineering	6870	6870
Chemistry	17540	17540
Dover Street Building	8190	3160
Holy Name Church and Chaplaincy	8640	8640
New Medical School (Stopford)	62200	62200
Sub-Totals	122810	117780
Planned Projects:—		
Multi-storey Car Park		31000
Sub-Total		148780
Spare Capacity for Future Expansion:—		
South of Dover Street		16000
Facing the Refectory		8000
Total		172780

Average Development Density — 1.9

Table G5 – U.M.I.S.T. Area A

Land Area 68 600m²

Buildings Existing in 1973:—	at 1973 m ²	Ultimate m ²
Barnes Wallis	6970	6970
Wright Robinson	4650	4650
Estates	2970	2970
Paper Science	2420	2420
Pariser	12170	12170
Staff House	2040	2040
Chemical Engineering*	19880	3160
Maths and Social Sciences	11430	11430
Ferranti	4830	4830
Chemistry (part within Area A)	10380	10380
Renold	10220	10220
Sub-Totals	87960	71240
Spare Capacity for Future Expansion:—		
Chemical Engineering		13000
Total		84240

Average Development Density – 1.2

** Of the 19 880m² 1973 building area some 16 700m² represents the old Jackson Street Mill which ultimately will be redeveloped.

Table G6 – U.M.I.S.T. Area B

Land Area 33 600m²

Buildings Existing in 1973:—	at 1973 m ²	Ultimate m ²
Chemistry (part within Area B)	13400	13400
Mechanical Engineering	9800	9800
Multi-storey Car Park	15980	15980
Sub-Totals	39180	39180
Planned Projects:—		
Arts		3250
Library		7500
Multi-storey Car Park extension		4220
Sub-Total		54150
Spare Capacity for Future Expansion:—		
Engineering Departments		29850
Total		84000

Average Development Density – 2.5

Table G7 – U.M.I.S.T. Area C

Land Area 32 700m² (including expansion area)

Buildings Existing in 1973:—	at 1973 m ²	Ultimate m ²
Main Building	46900	46900
Chandos Hall	3900	3900
Sub-Totals	50800	50800
Spare Capacity for Future Expansion:—		
Expansion Area		14600
Total		65400

Average Development Density – 2.0

Table G8 – U.M.I.S.T. Student Quarter

Land Area 72 000m²

	at 1973 m ²	Ultimate m ²
Buildings Existing in 1973:—		
Central Boiler House	210	210
Metallurgy	8830	8830
Residences — Grosvenor Place	10220	10220
Science Museum	1200	
Sub-Totals	20460	19260
Planned Projects:—		
Metallurgy Extension		3710
Sports Centre		13300
Science Museum		9290
Multi-storey Car Park		8910
Residences — Booth Street East		5200
Polytechnic Community Studies (Site 2) *		16500
Residences (Site 2)		3700
Total		79870

Average Development Density — see paragraph 5.22

* This is one of the proposed Polytechnic Buildings. It is included in this table as its location falls naturally within the UMIST Student Quarter notional boundaries.

Table G9 – Polytechnic Area

Land Area (Mancunian Way Excluded) 122 000m²

	at 1973 m ²	Ultimate m ²
Buildings Existing in 1973:—		
Art and Design + 1st Extension	16200	16200
John Dalton	14100	14100
John Dalton Extension	11000	11000
Hall of Residence — teaching space	3200	3200
Residences (Loxford Tower)	5500	5500
Administrative Centre	2100	
Cavendish House	1500	
Cavendish Street Chapel	400	
St. Augustine's Church	1500	1500
St. Augustine's Primary School	1000	1000
Adult Education	6100	6100
Northern College of Music	8600	8600
Sub-Totals	71200	67200
Planned Projects:—		
Central Building (Site 1)		24700
Humanities and Law (Site 3)		12200
Art and Design 2nd Extension (Site 4)		15500
Residences (Site 4)		3700
Multi-storey Car Park		32500
Total		155800

Average Development Density — 1.3

Note: Polytechnic Site 2 is included in Table G8 — see the footnote at the bottom of that page.

Table G10 – Other Areas within or adjacent to the Precinct

University Southern Residential Area	62 300m ²
North of Polytechnic between Chester Street and railway viaduct	52 000m ²
Hospital Area – north of Hathersage Road	184 300m ²
Hospital Expansion area – south of Hathersage Road	12 700m ²

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